ELECTRICAL Wholesaling

THE INDUSTRY'S SALES & MANAGEMENT MAGAZINE

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JANUARY • 1960

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Another Chance To Take EW's 20-Hour Electrical Course *page 104*

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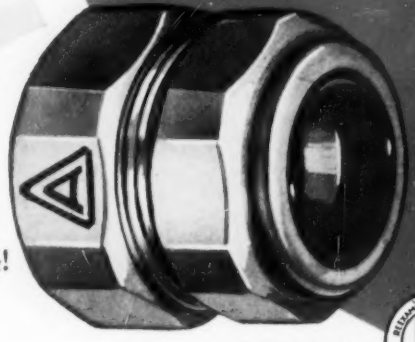

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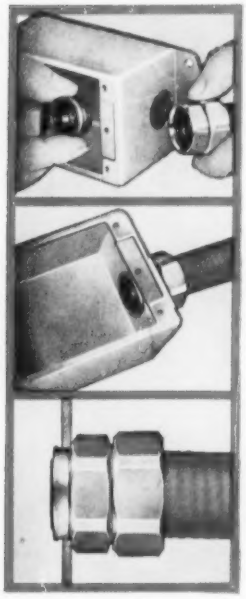

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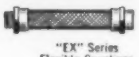

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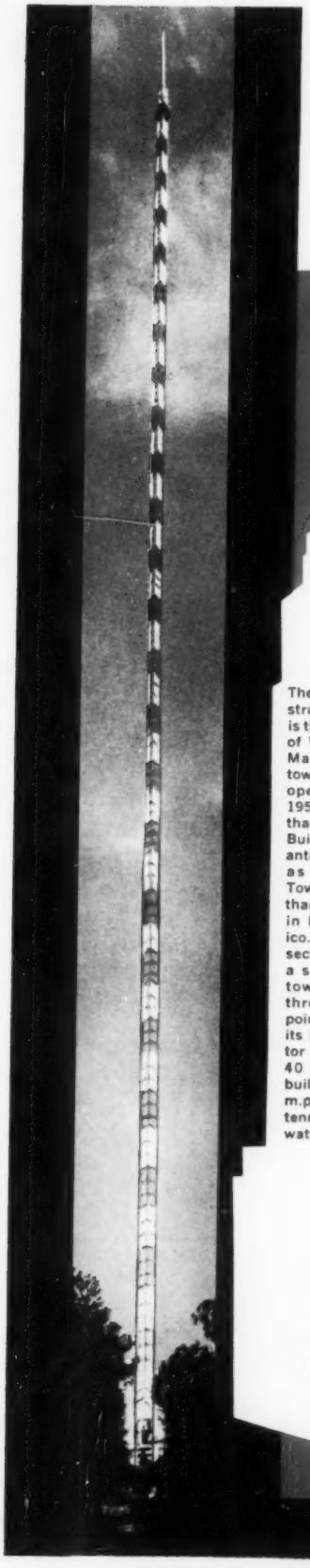

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January, 1960

memo
TO OUR DISTRIBUTORS

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Sincerely,

Bill

W. J. Moriarty
Manager, Distributor Relations

WJM:mv

Print Order This Issue:
13,782

JANUARY 1960

ELECTRICAL Wholesaling

THE INDUSTRY'S SALES & MANAGEMENT MAGAZINE

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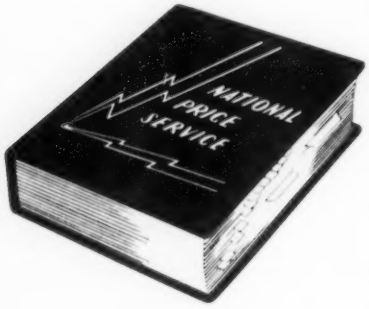

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ELECTRICAL Wholesaling

JANUARY, 1960

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Credits and Collections

"Succeeding in the '60s" is the theme of this issue. To help start the year and the decade off right, we suggest you turn to EW's Annual Outlook and Review, starting on **page 51.**

This 16-page special report will give you the immediate picture ahead, the prospects for 1960's sales, significant analyses of your individual markets and a review of 1959, both nationally and regionally.

Incidentally, please remember that the report is based on a mail survey of our readers. The return this year was, to quote an expert, "amazing". **More than half** of the independent electrical distributors polled on the outlook returned the two-page questionnaire. We want to thank them for their help.

What will be the shape of the electrical distributing business in the coming ten years? Only time will tell, of course. But if you want an idea of your future, start reading on **page 67.**

From that page on, you'll find articles on: selling industrial electronics, new products and application trends, what market research can do for you, an easy way to take inventory, and—another chance at the 20-Hour Electrical Course.

* * *

And now, our New Year resolution:

"We resolve to continue giving you the best industry sales and management magazine possible . . . to present factual articles full of practical ideas you can put to work, whether you're president, owner, sales manager, inside or outside salesman, counterman, price clerk, credit manager, warehouseman or shipping clerk . . . to continue making and maintaining contacts with you in the field in order to keep this magazine a vibrant, monthly package of indispensable information that reflects what's happening currently in this fascinating field of ours —electrical wholesaling."

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lightens the load... brightens the job... and never shows its age!

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CHANNEL MASTER CORP.
ELLENVILLE, NEW YORK

LETTERS TO THE EDITORS

"Splendid," "Great Value," "Fine"

. . . These are a few of the words used by distributors to describe Albert J. Borelli's "Selective Distribution as Related to the Independent Electrical Wholesale Distributor," published in the November issue of ELECTRICAL WHOLESALING. Some of the more thoughtful letters received are excerpted here; others will be published in forthcoming issues.

Can Lead to Action

Dear Sirs:

Mr. Borelli did a splendid job in his definitive study of selective distribution, which you published in your November issue (*page 71*). It is really remarkable that he was able to analyze this subject so thoroughly, and he certainly expressed the independent distributors' feelings and ideas very well on many of the facets of this subject.

I firmly believe that you have a wonderful opportunity by this sort of study to arrive at an intelligent understanding of some of our industry problems. This might well be considered as an opinion poll of distributor thinking about a specific phase of our operations.

So often we attend meetings or hold group discussions about some subject such as this and the matter ends with just a recognition that a certain problem does exist. With the publishing of a study such as this one by Mr. Borelli, the various aspects of the problem can be brought before manufacturers, their representatives and distributors throughout the whole country.

A widespread understanding of how the majority of distributors feel about selective distribution can and will, I am sure, lead to beneficial action on the part of many in the industry who were not aware of our attitudes.

I, for one, say, "Keep up the good work." I would like to see the same type of research applied to other phases of our operation in the future.

If I were pressed for some constructive criticism, about the only thing I would offer would be the suggestion that a few graphs might be used along with each chapter of the study. Today's businessman is getting to depend more and more on charts and graphs for a quick summary of ideas. The summary used in Chapter Two is a good example of what I mean.

The group of recommendations for manufacturers and distributors in Chapter Fourteen are well thought out and should be read many times throughout the year by each of us. So often we get so completely involved in the mechanics of running our organizations we forget to watch the direction we are heading.

Congratulations to Mr. Borelli and to your magazine for doing a splendid job.

E. C. PHILLIPS

VICE PRESIDENT
COAST ELECTRIC CO.
SAN DIEGO, CALIF.

Customer More Important

Dear Sirs:

. . . First of all, I would like to express my wholehearted agreement with the conclusions and recommendations. I found the study thorough, clear and of great value. I would certainly recommend it to all manufacturers selling through distributors and have already done so to one important manufacturer who is fumbling around with a selective policy on selected items to selected customers: highly selective in so many phases that it can hardly be dignified with the name "distribution."

The one passage I had marked appears in the second paragraph of Chapter 3 on page 75, starting, "And, of course, the independent distributor's credo," etc. It may not be fair to Mr. Borelli or apropos of his article, which is limited to the manufacturer-distributor relationship, but the successful distributor will not have a credo relating exclusively to or even predominantly to manufacturers. A distributor's business is largely his customers, and the distributor who has sufficient of these will usually find his relationship with the manufacturers fairly good. This brings out the basic conflict in our business as to whether the term "supply house" or "distributor" is more accurate. There is some question as to whether it is the manufacturer who pays for the distributor's services by way of the discount or whether the customer pays for the services rendered. From Mr. Borelli's viewpoint, his statement seems logical and, of course, the customer relationship is not within the scope of his study. Nevertheless, the distributor buys and sells, has no retainer from the manufacturer and usually feels loyalty forward in the chain of distribution.

Mr. Borelli's statement refers more to the reason why those manufacturers who sell to distributors find it to their advantage to do so. The distributor's existence is due to his ability to fill the customer's requirements more efficiently than any other channel. This, of course, includes price as well as other elements in the transaction.

It is easy to point to any number of large transactions where it is difficult to justify the distributor's position. However, when viewing the larger picture of the sale of the whole production of any manufacturer in this line of business, and the reverse side of the same coin—the total purchase of this production—the distributor is the most efficient means of distribution. If he were not, neither manufacturer nor customer would tolerate his existence.

I do not wish these remarks to seem to be critical of Mr. Borelli's very fine work. I merely wish to correct a possible impression that a distributor depends for his existence on the manufacturers to the extent implied in the individual passage mentioned above. Obviously, a distributor is a middleman with the necessity of good and close relationships with his suppliers and customers and it is not possible to assign a categorical value to one over the other. I do believe, however, that the customer is the more important, a belief strongly supported in implication by Mr. Borelli's Chapter 4, "Does Participation Guarantee Sales."

ALEXANDER S. PARR

TREASURER,
PARR ELECTRIC CO.,
NEWARK, N. J.

Let's Have More

Dear Sirs:

. . . I certainly concur with other independent electrical wholesale distributors in their praise of selective distribution. We enjoy operating under this business pattern in partnership with several of the country's leading electrical manufacturers. For the most part, selective distribution

has been highly successful for us—"straight across the board."

I might add, however, some of the manufacturers that profess to operate under selective distribution only give lip service when it comes to carrying out all phases of it, as so well defined in Mr. Borelli's article.

May more of our suppliers investigate and put into operation selective distribution!

B. G. TONQUEST
LA SALLE ELECTRIC SUPPLY
LA SALLE, ILL.

Distributor Must Give

Dear Sirs:

It is our opinion that the presentation by Mr. A. J. Borelli . . . is one of the finest prepared statements for our industry in years. We feel that such a special study . . . has been a marvelous contribution to the materials on electrical distribution. And, in a sense, it furnishes us with a very workable analysis of the profitable methods of handling our operations.

Topic in general: Most electrical distributors would like to enjoy the status of exclusive insofar as electrical products and their sale and development go. In the true sense, selective distribution, as a policy established between an electrical distributor and an electrical manufacturer, is a very responsible and restrictive relationship. Unless this is clearly understood, its effectiveness is lost. There is no hiding of candles under baskets for either party. Most of all, it is important that the electrical distributor understand his responsibility in such matters.

Our relationship in the field of selective distribution has been both good and effective, and beneficial. . . . We feel the arrangement has benefited ourselves. We feel that our sales indicate that the arrangement has benefited these manufacturers.

On the distributor's part, we feel that something of the old type of independent thinking essential to free market selling must be curtailed. The "I'll run my business like I want to" attitude is just not in keeping with selective distribution. If the distributor desires selective distribution in his area on a product, that distributor has an obligation to provide: (1) the market development essential to provide equipment sales in keeping with the total market; (2) as complete a coverage on the sales of the equipment as would be expected, i.e., sales training, technical information, etc.; (3) reduction of all competitive products, not only as to inventory, but towards selling of equipment (salesmen will sell anything, whether carried by his house or not).

Selective distribution calls upon the very best within the electrical distributor to be effectively used. It should be possible to bring about a high level approach to a market in an attempt to produce sales required from such an arrangement.

Article in particular: It is our feeling that any development that requires more and more financial responsibility on the part of distributors will only tend to improve profit structures.

(1) Inventory investment is the mark of putting up money where words are cheap. It will make a count of the *men*.

(2) While not a guarantee of sales, it requires the distributor and the manufacturer to really work closer together.

(3) Selective distribution will not create saints of sinners. There is no reason to believe that a distributor with an exclusive product will increase his margins in competition with another distributor with another (similar) exclusive.

(4) There is always a difficulty in carrying "one" line. A strike, storm, or competition can easily hurt the exclusive arrangement. Consequently, these very factors become built into the agreement and, in a sense, keep everyone on their toes in order to avoid the pitfalls of trouble.

(5) Selective distribution will essentially benefit service. A distributor will become the headquarters for the products. Repair parts and replacements—important in today's markets—can be more effectively utilized.

(6) Technical training makes the distributor a technical source for his customers. The "poor slob" attitude by distributors is not tolerable. But in turn, customers know they can expect real answers and depend more and more upon the distributor.

(7) The advertising program gains in effectiveness. It can be so correlated as to bring about the maximum use of money, story, and effective results for promotions.

We feel that we can see only good from selective distribution. But we are fully conscious of what we must give to the relationship to make it effective.

CHARLES E. ARGAST
FARRELL-ARGAST ELECTRIC CO.
INDIANAPOLIS, IND.

Original Thinking

Dear Sirs:

. . . This is one of the finest exposes on this subject that I have ever seen, and Mr. Borelli certainly should be congratulated on a fine piece of research and original thinking. . . .

J. B. HARRIS, JR.
PRESIDENT
RUMSEY ELECTRIC CO.
PHILADELPHIA, PA.

Profit Earns Interest

Dear Sirs:

. . . I have always firmly believed in selective distribution for both a wholesaler's and supplier's point of view. A wholesaler, I believe, has a more workable relationship with a manufacturer on a selective basis; both develop more confidence in each other.

The distributor can afford to spend more time developing business on a product that he handles on a selective agreement. The distributor can work hand in hand with a supplier and each can utilize the other's knowledge, i.e., job information, marketing knowledge, unusual applications, etc.

The more profitable a line is to a distributor, the more time he can put into the production and sales of the product. . . .

R. C. BROYER
VICE PRESIDENT
BARRETT ELEC'L SUPPLY CO.
ST. LOUIS, MO.

Worth Studying

Dear Sirs:

A wonderful bit of writing and research. What would 30 copies cost me? I want every Kirlin "rep" to study it.

PAUL CORNELISEN
KIRLIN COMPANY
DETROIT, MICH.

• *Reprints of "Selective Distribution as Related to the Independent Electrical Wholesale Distributor" are available at the following rates: 1-49, 35¢ each; 50 or more, 30¢ each. Write: Reprint Dept., ELECTRICAL WHOLESALING, 330 West 42nd St., New York 36, N.Y.*

1960: Bullishness and Balance

How does 1960 look to electrical distributors? If you dodge all the "Ifs"—if the steel strike resumes, if the copper strike continues, if we have a railroad strike—then it looks promising. An analysis of EW's annual survey on the outlook for the new year reveals a strong feeling for continued growth. Overwhelming majorities of distributors expect to realize gains in sales, profits and—lamentably—costs (*page 51*). The median expectation for over-all sales is a 5% increase, which matches precisely the forecast made by the McGraw-Hill Department of Economics for the electrical wholesaling industry.

Getting down to products, electric heating equipment, wiring supplies, motor controls, and lighting fixtures appear to be the hottest ones. Electric heat is the standout: one-third of the distributors responding in our survey expect to increase sales of this product group 20% or more during 1960.

Despite expectations of substantial volume gains in some cases, most distributors express a need to put profits first. The desirability of a balanced approach was perhaps best described by a distributor who qualified his optimism this way: "Our bullishness on sales is based on construction started in the area. Our bullishness on profit is based on our whole organization realization that we have to improve in this category."

1960s: Opportunities and Dangers

"Suddenly It's 1960" and "The Forward Look" were clever catch-phrases in an automobile advertising campaign three years ago. They alluded to styling and mechanical advances said to be ahead of their time. This idea of being forward-looking is one that the editors of ELECTRICAL WHOLESALING believe distributors would be wise to adopt as a new decade resolution.

Suddenly it **is** 1960, and the electrical distributing industry is moving into what may be its most exciting, promising—and dangerous—decade. Present markets will take great leaps forward. And markets whose chief appeal today is their enormous potential, such as electric heat and industrial electronics, are seen as coming into their own in the next 10 years.

With these marketing opportunities will come an increase in marketing tensions. The pressures on traditional distribution channels are destined to become more intense. And the wholesale distributor will be on the spot to prove his efficiency—again, again and again—as (1) suppliers, driven by their ambitions and their competitors, seek ways to take up real or imagined slack in their line to the ultimate user, and (2) customers, similarly motivated, probe deeper for price and other concessions.

As a first step in a program to alert electrical distributors to the opportunities, dangers and changing demands of the new decade, EW presents "Succeeding in the '60s," a three-article section in this issue, highlighting:

- **Industrial Electronics:** How one electrical distributor is "playing this new market by ear." Through pioneering in the sale of electronic-type products to its industrial customers, Artcraft Electric Supply Co., Wilmington, Del., has a foot in the door of the future (*page 67*).
- **Product Application Trends:** Electrical design is a dynamic thing. Advances at the manufacturing, design, application and inspection levels of the electrical industry produce a constantly expanding, changing market. An appraisal by our technical consultant pinpoints some important trends that will particularly affect the products you sell in the '60s (*page 71*).
- **Market Research:** This proven tool is viewed with much skepticism by distributors, yet it offers much promise in problem-solving and market development. On *page 74*, a practicing professional offers a rundown on the why, how and how much of market research.

The Forward Look has many more facets. You'll be reading about them.

George Langenmuller

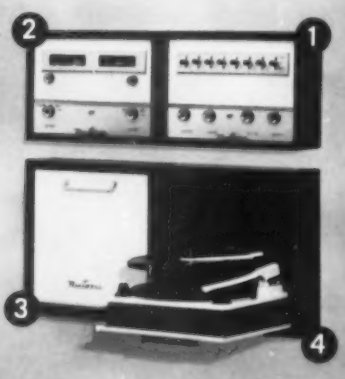
EDITOR

NEW

NUTONE BUILT-IN STEREO COMBINED WITH AM & FM RADIO, INTERCOM, HIGH FIDELITY MUSIC

Now you can offer STEREO through the entire house, not just in a single room. No costly console cabinets. . . No wasted floor space! Everything is built-in. Fits standard 4" studding.

Arrange the components you want to suit your own plans. The moderate cost will surprise you . . far less than the same units in cabinets.



It's new . . it's beautiful . . it's Stereo . . plus the step-saving convenience of Intercom . . plus am-fm Radio . . plus High-Fidelity music . . combined in the NuTone Built-In Stereo System.

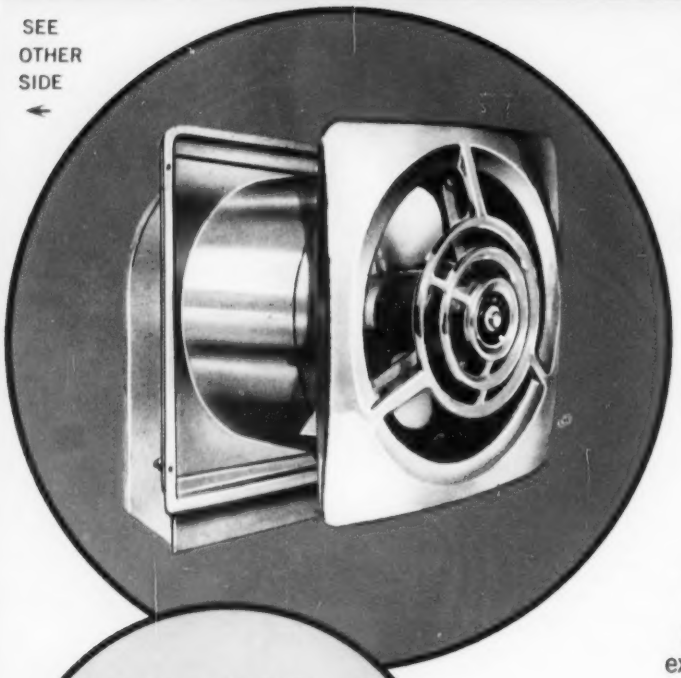
Built-In Wall Speakers offer the finest tone because no cabinet can match their rigidity and size. The complete system is engineered for easy operation.

Here is an exciting idea for your 1960 homes . . a real luxury . . which adds many times its cost to the home value.

1. Dual Chassis Amplifier . . . also contains Intercom Controls..
2. AM-FM Radio Tuner . . . receives two programs at the same time.
3. Built-in Cabinet for Record Storage . . or Cartridge Tape-Deck..
4. Fold-into-wall Record Changer. 4 speeds. Automatic shut-off.
5. Wall Speakers with controls for Intercom . . Balance . . Volume.
6. System includes Door speaker, Remote controls, Outdoor Speakers.

SEE OTHER SIDE ⟶

SEE OTHER SIDE ←

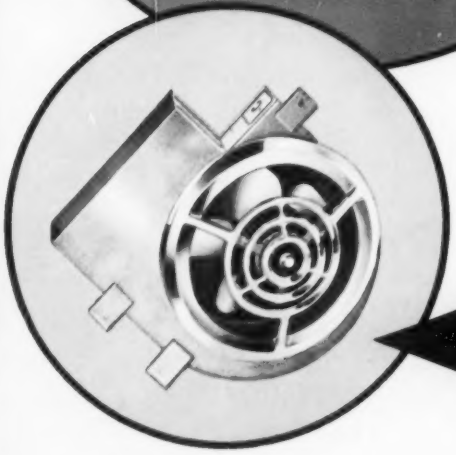


NUTONE'S *New* *Jet-Power* FANS

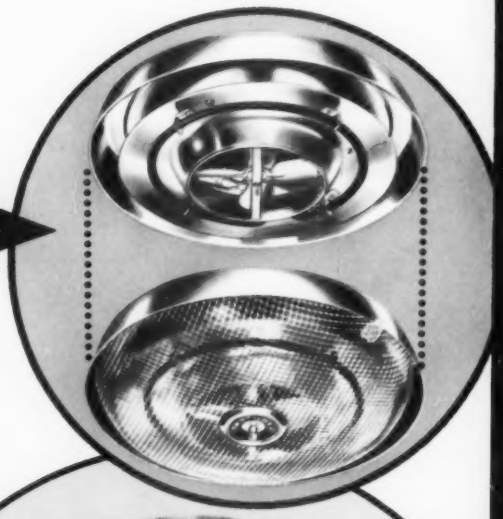
CRISP, ULTRA-MODERN STYLING!

NuTone offers America's Newest Exhaust Fans. Completely redesigned for beauty and luxury . . engineered for power and performance. Changed in every way — except the price is the same!

Sparkling anodized grilles for the "Jet-Look". Improved motors and blades for "Jet-Power". Nine new models for wall and ceiling . . Pull-Chain or Automatic . . Horizontal or Vertical Discharge . . All NuTone Exhaust Fans meet or exceed FHA Minimum Property Standards. (MPS.)



NuTone



NUTONE'S *New* *Ceiling* HEATERS

"BUILT-IN" OR SURFACE MOUNTED

New slim-line styling that hugs the ceiling! Your choice of surface-mounted Radiant Type with air-cooled housing . . or the Exclusive Heat-A-Ventlite . . combining a Heater plus an Exhaust Fan plus Ceiling Light — to save space.

NuTone Ceiling Heaters have armored elements for longer life and trouble-free performance. Moderate in Cost — Easy to Install.

NEW DELUXE 1960 Catalogs in BINDER

Write to NUTONE, INC., Dept. NA-1, Cincinnati 27, Ohio

TOP OF THE NEWS . . . and its significance to you

Bids For Bulbs Bugged

Going once—going twice—sold to the lowest bidder!—Almost. According to a recent front-page story in the St. Louis Post-Dispatch, a $50,000 contract for electric light bulbs for the state of Missouri last Fall was awarded to Alpha Distributing Co., St. Louis, a disfranchised firm, which reportedly **was not the low bidder.** Alpha reportedly was allowed to submit a new bid after the formal bidding was closed, which was denied 16 other bidders. According to the newspaper report, the lowest bidder submitted the original low offer of a 48½% discount, Alpha reportedly offered a 52.76% discount after the formal bidding was closed. The St. Louis newspaper stated that a St. Louis city official was an executive of the firm that was allowed to alter its original bid from a 47% discount.

P.S.: The state purchasing agent, according to a report, has since left his office.

Strike Settlements Start Sixties

"Hi-Ho, Hi-Ho, it's off to work we go,"—this is the chant many workers in the metal industries are singing with the start of a new year. As EW went to press the following settlements were made or were in sight:

Steel: Although the 80-day back-to-work injunction terminates January 27th, economic observers believe the nation's steel workers will vote favorably to accept the company's "last offer."

Copper: Kennecott Copper Corp. and the Mine-Mill Union have agreed on a settlement of the four-month-old strike against the company, it has been reported. However, other unions are still on strike. Other copper producers are reported near settlement on strike issues.

Aluminum: Aluminum producers and the United Steelworkers last month reached agreement on a new labor contract, but not without a raise in the price of aluminum. Aluminum Co. of America raised the price of aluminum pig by 1.3 cents a lb. to 26 cents. Other major producers are expected to follow the increase.

Manufacturer Mergers

Revere Electric Mfg. Co., Niles, Ill., has purchased **Hutchinson Mfg. Co.,** Houston, Texas, it has been announced. The Houston company reportedly will operate as a subsidiary of Revere. The merger of **Electrosnap Corp.,** Chicago, Ill., into **Controls Company of America,** Schiller Park, Ill. was recently submitted to stockholders.

American-Marietta Co., Chicago, Ill., according to a report, has acquired all of the stock of **Steel City Electric Co.,** Pittsburgh, Pa. According to an American-Marietta spokesman, Steel City Electric will continue under existing management.

Strikes Dent Fourth Quarter Sales

Electrical wholesale distributors throughout the nation felt the brunt of nationwide strikes in the steel, copper, and aluminum industries in fourth quarter sales. But most of the nation's distributors report: **"No serious effect."** For the complete story see News For the Industry (*page 90*).

Electric House Heating Exposition Scheduled For March

Are Electrical Distributors Losing Electric Heat by Default to Warm Air Distributors?—this is one of the topics to be discussed at a symposium on electric house heating, a feature of the **First National House Heating Exposition** to be held **March 21, 22, and 23 in Chicago.** The three-day show is sponsored by the Electric House Heating Equipment Section of NEMA.

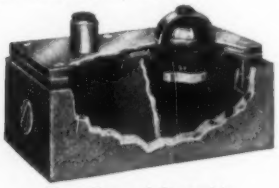
Latrobe *Electrical* Products

For quick, on-the-job installation you can't beat the #190 "Tru-Level" fully adjustable steel floor box.

Quick and easy tru-leveling is accomplished by an adjusting-ring threaded ½" and three 2½" long screw legs.

Nine K O's take care of any size wiring and large opening enables inside attachment of conduit without removing box body cover.

Listed under re-examination service Underwriters Laboratories, Inc.



Two Gang Adjustable Floor Box

Adjustable Boxes come in single-round or square bodies. Also in square type Single Gang, Two, Three Gang and Four Gang Boxes. All adjustable boxes are now bonded which makes them fire-proof.

"Latrobe" Pipe or Conduit Clamp

This clamp is made with a double safety bite of case hardened tool steel. Two models —Right Angle and the Parallel support. Each model comes in 11 sizes to handle pipe or conduit ½" thru 4".

Latrobe Products

Non-Adjustable Floor Boxes
Adjustable Floor Boxes
Gang Boxes—Cover Plates
Junction Boxes—Nozzles
Pipe or Conduit Hangers
Insulator Supports
Cable Supports—Fish Wire
Staple and Cable Clips

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HIGH VOLTAGE

Dr. Lewis Takes Another Look

Dr. Edwin H. Lewis, author of the renowned study, "Distributing Electrical Products in a Dynamic Economy" (EW—June '58, p. 77), recently addressed the Manufacturers Division of the Electric Association of Chicago. His subject: "Electrical Distributing—an Over-all Appraisal," based on the findings of his EW-sponsored study. Portions from Dr. Lewis' talk that have not been published previously are excerpted here:

. . . **Since I began to take a rather close look at the electrical industry three years ago,** it has been apparent that this industry indeed is "different." It is hard to say, however, whether the operating problems of this industry are any greater than those of most other industries. There is a natural tendency for every businessman to feel that his row is a little harder to hoe than those on the other side of the fence. So long as we have a competitive society operating under the free enterprise system, we cannot escape the problems created by competition. Actually, of course, this is a comparatively small price to pay for the demonstrated benefits of the f enterprise system.

The competitive problems in the electrical apparatus and supplies industry arise from several factors. One, certainly, is the tremendous range and complexity of the product lines. Another is the tendency toward oversupply in lines which are comparatively easy to make or assemble, such as wiring devices or lighting fixtures. This over-supply exerts great pressure on the existing channels of distribution. Middlemen, both distributors and manufacturers' representatives, are forced to make choices of the lines they will handle. And manufacturers who are thereby excluded must, of necessity, seek new outlets.

This brings additional distributors and agents into the market, frequently in localities where they are not really needed. And since the growth of these establishments tends to be faster than the overall growth in demand, competition becomes sharper. The new firms in an attempt to become entrenched in the market do not necessarily follow the same competitive tactics which established firms have used. They don't carry all of the usual lines—frequently only the fast-moving lines. And they may not always be too careful about the quality of lines they handle. They may feel that it is more profitable to emphasize price rather than service, and they may devise ways of reaching new types of customers or penetrating into more distant markets. Agents handling these lines may decide to sell directly to users with or without the distributor's aid in assuming the credit risk.

Still another competitive problem is the great emphasis on price, especially for products going into construction. Most business firms prefer to compete on a non-price basis rather than in terms of price. It is generally more advantageous for companies to compete in product quality, design and performance, and in service and sales rather than price. Competitive comparisons of these factors are not as obvious as a price comparison.

A company can continue to make innovations with respect to these factors which competitors may not be able to follow or may not appreciate until it is too late. By then, the first firm has taken a new tack. By shifts in service and sales promotion activities, and by changes in the product line or even in packaging, an aggressive firm can stay in the forefront of his field for an indefinite period.

Price competition on the other hand leads almost immediately to retaliation. Prices spiral downward to the point where virtually everyone in the industry stands to lose. Unfortunately, price competition at its worst is rampant in electrical construction materials. The rebidding system, which has become so common in the industry, is a case of having a bear by the tail and not knowing how to let go. And so deeply are all elements of the industry mired in this practice, from the manufacturer to the contractor, that it is easy to pass the responsibility for the practice to someone else.

There is a tendency to load the blame on the contractor—and I am sure that part of it belongs there—but the unavoidable fact is that the contractor must find someone who will sell to him on the terms he offers. And this puts the manufacturer, the manufacturer's representative and the distributor squarely in the picture. If products that are required to meet building specifications are not

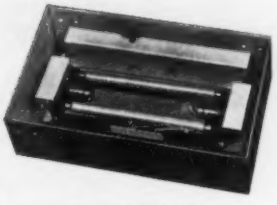
There is greater value in Kirlin EXITS

THE COMPLETE LINE

ALL ALUMINUM

AT PRICE OF STEEL

VARIETY OF MODELS



FLUORESCENT
has 6000 hour lamp life

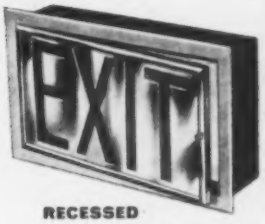
shock resisting glass
glow-in-dark glass
stenciled metal fronts

also available "MEN" — "WOMEN"

EXPLOSION-PROOF EXITS ALSO WITH STANDARD 6" LETTERS

Wiring inter-changeable for either incandescent or fluorescent lighting

Surface units have luminous bottom



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cast aluminum frame

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CORNISH WIRE COMPANY
Support your local ADEQUATE WIRING BUREAU Program
A selective all-around line of Blue Chip wire products. Expertly engineered and manufactured. Presented in modern put-ups. Backed by a national reputation for Quality . . . and swiftly available from a warehouse close to YOU.
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Stock carried
Producers of Quality Wire Products for Home, Farm and Industry

made available to contractors at unprofitable prices, the practice—of necessity—will be curtailed.

The current pricing situation would seem to have several implications for both distributors and manufacturers. Distributors who are the most dissatisfied and the most affected by cut-price bidding will have to face up to the possibility that they may have to drop this phase of their business and find some other avenue for their efforts. This conclusion was stated in an editorial in the October issue of ELECTRICAL WHOLESALING. Actually some manufacturers and some distributors have learned to bid their best price and to stand firm once a bid has been placed.

Price competition is probably a permanent part of this industry, and in fact it is likely to become more of a factor as industrial buyers resort to a greater extent to purchasing on the basis of price quotations. The problem here is not to avoid price competition, since in an increasing number of cases it cannot be avoided, but rather to keep it within profitable limits.

One way to limit the impact of price competition is for manufacturers and distributors to use every means at their disposal to shift the emphasis from price to quality and design, performance and service. This requires never-ending effort, imagination and application and clearly is more likely to bring results in some lines than others. . . .

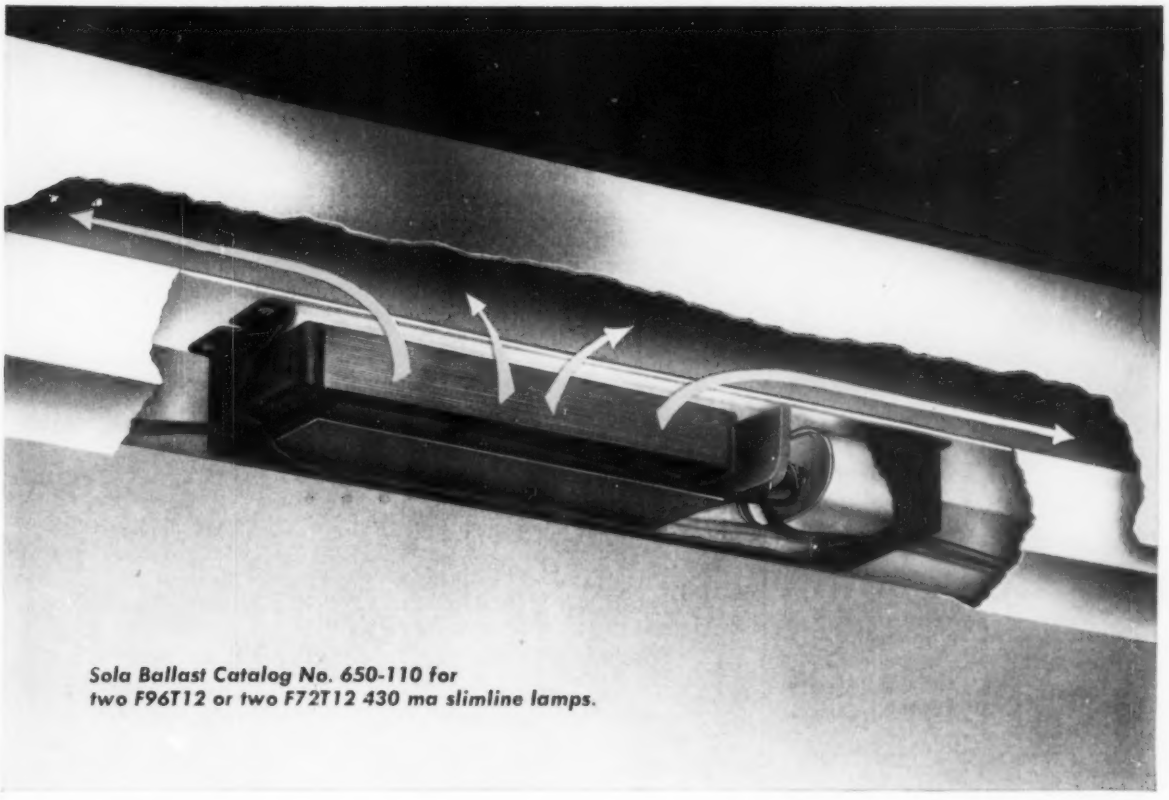
Electrical Industry May Exceed Economy's Growth

SAN FRANCISCO — The electrical industry will continue its historical pattern of growing faster than the national economy as a whole, predicted Ralph J. Cordiner, chairman of the board of the General Electric Co., recently at a San Francisco GE meeting.

Cordiner estimated that the industry's output could rise from its present approximately $20 billion a year level to as much as $44 billion by 1966, and to $90 billion by 1976.

He based his optimism for the future in part on the fact that "in the United States, as elsewhere, the use of electricity is geared not only to population growth, but also to advances in the level of living."

The majority of American homes today have at least 12 electrical appliances.



Sola Ballast Catalog No. 650-110 for two F96T12 or two F72T12 430 ma slimline lamps.

Upside-down insides make Sola's new slimline ballast work cooler, dissipate heat faster

Heat, the big enemy of fluorescent ballasts, is well on its way out thanks to a simple but extremely effective move by Sola ballast engineers. They mounted the components of their slimline ballast *upside-down*. This allowed them to remove the fiber insulator from the mounting surface of the ballast case. Now positioned beneath the label surface, it can't trap heat inside the case.

The normal heat generated by the core and coil is transmitted directly to the fixture housing where it is quickly conducted away. The fixture itself acts as a big cooling fin for the ballast. Additionally, a healthy margin of extra space is provided between the capacitor and the core and coil. This extends capacitor life.

All this adds up to a premium ballast that operates cooler, works more efficiently, and lasts longer. Despite this, it costs no more than conventional, hotter-running ballasts. You get premium performance now at no price penalty. The new ballast is CBM-certified to give full light output over its rated life.

You would be wise to capitalize on Sola's upside-down act when you next need ballasts for quality fluorescent fixtures, or for replacement where other ballasts gave up.

Write for Bulletin 27A-FL.

SOLA

B P
C

CONSTANT VOLTAGE TRANSFORMERS · REGULATED DC POWER SUPPLIES · MERCURY LAMP TRANSFORMERS · FLUORESCENT LAMP BALLASTS

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15,000 HOUR LONG LIFE SLIM LINE FLUORESCENT LAMPS

"A Carriage Trade Product"

Suclar Laboratories, pioneer in the development of long life flourescent lighting, is in volume production to supply wholesalers throughout the country with a superior, long life 15,000 hour Slim Line Flourescent at competitive prices. A complete line of 96", T-12's is available in all colors.

EXTRA LONG TRADE DISCOUNTS GUARANTEE YOU EXTRA BIG PROFITS

Price scheduling is designed to give you a competitive edge with a greater profit margin. Here is an unchallenged opportunity to offer your customers more flourescent lighting than ever before at a lower price than they are paying for ordinary flourescents. At the same time — you make more!

SOME EXCLUSIVE TERRITORIES STILL OPEN FOR QUALIFIED REPRESENTATIVES

Write, wire or 'phone for special details about the new Suclar 15,000 Hour Long Life Slim Line Flourescent Lamps.

Suclar

LABORATORIES, INC.

1197 McCarter Highway

Newark, New Jersey

CAPITOL CIRCUIT

• **Sales of electrical construction material** should be 3.5 times greater during 1970 than in 1959, predicts Commerce Department's Business and Defense Services Administration. However, BDSA conditions its estimate on the availability of materials. The government prediction is based on an anticipated 2% rise in total construction during 1960, plus the demand for modernization of existing structures. Residential housing, specifically, is expected to decline by about 3%.

Final 1959 sales of electrical construction material should be about 11.5% higher than during 1958, adds BDSA. This will be due principally to a 10% rise in new construction during the year—totaling $54-billion. Lighting equipment alone is estimated to account for $575-million during 1959.

* * *

• **Sales of all types of electrical equipment and appliances** should show increases in 1960 over 1959, BDSA also reports. Household appliance sales, by manufacturers, should increase about 7% in 1960, BDSA predicts, reaching about $5.35 billion. In spite of the steel strike, manufacturers' sales did close about 15% ahead of 1958, the federal agency reports.

* * *

• **Budget Director, Maurice Stans,** has re-emphasized the Eisenhower Administration's stand against inflation, calling for a halt or reduction in those federal programs which no longer are necessary to the purposes for which the programs are created—rural electrification and "public works projects like the Tennessee Valley Authority" given as examples. Stans claimed that future demands on REA funds would continue to increase as co-ops expand their operations, but "the reasonable approach would be that co-ops should obtain part of their financing from other-than-government sources."

* * *

• **The Federal Trade Commission** has launched a new campaign against "bait advertising" in which sellers advertise a popular product at a "sensationally low price" in order to lure customers into their place of business—when the advertiser really plans to switch the customer to higher priced merchandise.

* * *

• **Administration officials** aren't as sure now that 1960 capital expenditures will top the 1957 all-time record of $37-billion. The newest estimate—based on a joint Securities & Exchange Commission, Commerce Department survey—calls for between $36.5 and $37 billions during 1960. To beat the 1957 level would require a "brisk pickup" in estimated spending levels for the last nine months of 1960, and any resumption of the steel strike would kill this immediately, the report points out. Manufacturers—with durable goods producers leading the way—already are showing signs of picking up lost ground during the first quarter of 1960.

The joint report pointed out that, by the end of 1959, almost every segment of major industry had felt at least a secondary squeeze because of the steel strike, and as a result, year-end estimates showed 1959 capital spending slowed down to about $32.6 billion.

* * *

• **Federal grants** for airport construction during the present fiscal year (ending June 30, 1960) will be shifted strongly away from terminal construction—5.3% of grants made for terminals, compared with 27% in fiscal 1959. In turn, 3.8% of the money ($2,147,-085) will be spent on lighting of runways, while 4.1% ($2,322,959) will be spent for construction and wiring of control towers.

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Chromate Plated

FOR LASTING PERMANENCE!

Concrete tight! Every size connector and coupling up to 2".

...AT NO INCREASE IN PRICE!

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Why settle for ordinary fittings when ETP gives you all this:

- New tough protection! Sparkling Zinc Chromate over-plating to retard corrosion. Same as tested and approved by the U.S. Government for use in aircraft, rockets and missiles. Salt spray tested.
- Exclusive pre-set, deep-slotted STAKED screws. No backing out for conduit.
- Precision bevelled edges with extra heavy duty locknut.
- One piece solid tubular steel—cannot open or spread. Sized for uniformity.
- Available in ½", ¾", 1", 1¼" (one screw type) and 1½" and 2" (two screw type) sizes.
- Concrete tight with heaviest gauge wall thickness! Far surpasses U.L. requirements. U.L. file card F24788.

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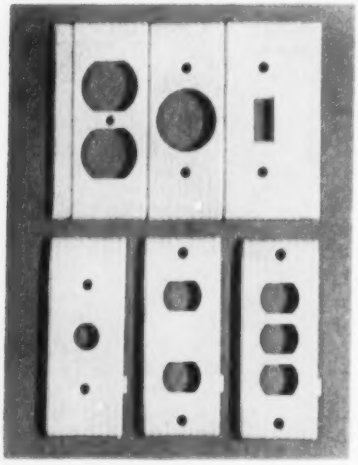
ELECTRIC TUBE PRODUCTS *74-16 Grand Avenue, Maspeth (N.Y.C.), N.Y. DEfiance 5-8000*

NEW PRODUCTS



Wall Plates

Sectional wall plates are self-aligning, maker says

Plates made of plastic, in brown or ivory, are self-aligning with lug and slot arrangement. Wall plates may be arranged for any desired combination of switches, outlets or wiring devices. • **Pass & Seymour, Inc., Syracuse, N.Y.**

Caps and Connectors

New line of yellow caps and connectors are grounded

Yellow color is not finish or spray, maker says, but molded throughout. Made of rubber, the caps and connectors have high dielectric strength. Available in conventional 2 wire and 3 wire types. Grounding types in 3 wire-2 wire styles. Hart-Lock styles in 3 and 4 wire types. Ratings: 15-amp, 125-v; 15-amp, 250-v; and 20-amp, 250-v; 10-amp, 600-v ac. • **Arrow-Hart & Hegeman Electric Co., Hartford, Conn.**

Controlled Area Heater

Infrared rays may be directed to a specific area

Called "Quartzone Tube Electric Heater," the unit emits infrared rays by metal coils. Fused quartz tube has high resistance to thermal shock, according to manufacturer. Made with louvered, weatherproof housing, bonderized and finished in golden bronze with chrome plated guard. Inside of heater, finished with highly reflective aluminum, designed to direct radiant heat rays over a rectangular area. Supplied with universal brackets for chain suspension or for bolting to ceiling and wall brackets. • **Electromode Div., Commercial Controls Corp., Rochester, N.Y.**

Switch

Miniature lever-actuated switch for panel mounting

Miniature switch, type MA-12-L, provides multi-circuit control, panel-mounting, and lever operation in compact unit suitable for low-power and electronic circuits. Assembly can be furnished with one or two sections, allowing up to 12-pole switching. Ratings are: 3-amp continuous current, 115-v ac, interrupting rating, ½-amp, 115-v ac, voltage breakdown 1000-v RMS. • **Electro-Switch Corp. Weymouth, Mass.**

Channel Bar

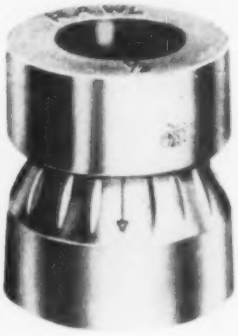
Designed for hanging of box units, fixtures and conduits

Unit has slotted opening that allows easy positioning of channel carriers, box fasteners, conduit clamps, or ¼-in sq nut and threaded rod, maker says. Available in 2 sizes. Larger size (No. 6013) is .388-ins deep with inside width of .576-ins, smaller size (No. 6014) has depth of .263-ins and inside width of .451-ins. Also available in double bar assembly (no. 6012). • **Steel City Electric Co., Pittsburgh, Pa.**

Drum Fixtures

Fixtures have new hinging arrangement, manufacturer says

Four new opal hammerhead drum series fixtures have been added to line, maker says. Suitable for home or commercial use. New hinging arrangement allows easy relamping, maker says. Features: aluminum pan, fiberglass insulation, hinged lock-up, no bottom caps or pummel screws and white opal glass. Sizes: 10-in, 12-in, 14-in, and 16-in. • **Moe Light Div. Thomas Industries Inc., Louisville, Ky.**



Bolt Anchors

Heavy duty masonry anchors for ¼-in to 1-in diameter bolts

Threaded style called "Multi-Calk," designed for applications where it is desirable to have bolt head out of hole. Makes it unnecessary to cut or burn off protruding stud, should fixture be removed, maker says. Consists of lead sleeve caulked down over hard metal cone. • **The Rawlplug Co., Inc., New Rochelle, N.Y.**

Explosion-Proof Union

Available in only ½-in size for rigid conduit and fittings

New small style explosion-proof union designed for use in installing rigid conduit and fittings in hazardous areas. U.L. approved. • **Appleton Electric Co., Chicago, Ill.**

Fittings

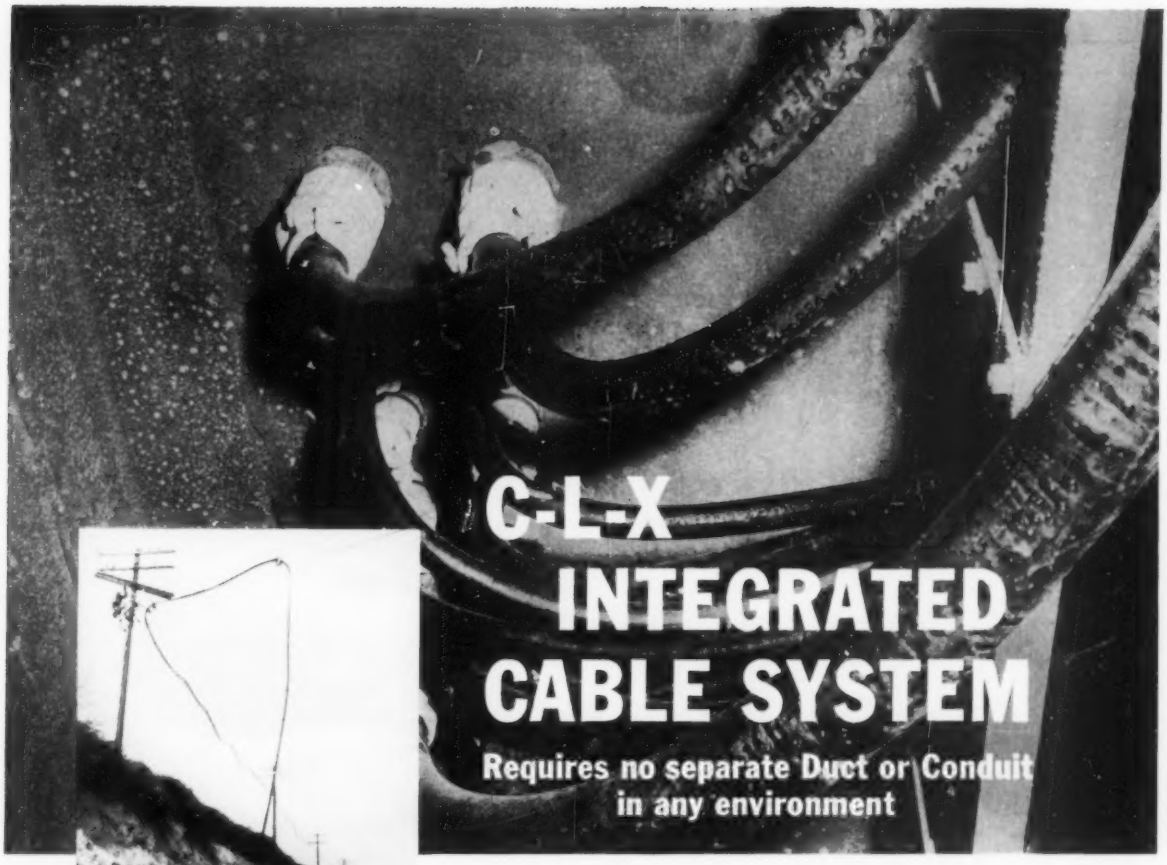
Screws can be set in "up" position

Concrete-tight EMT set screw fitting is offered in full range of sizes, from ½-in to 2-in. Since screws can be set in "up" position, installation time is said to be cut in half. U.L. approved. • **Allen-Stevens Conduit Fitting Corp., Woodside, N.Y.**

Range Hood Fan

Unit eliminates smoke, grease and odors, maker says

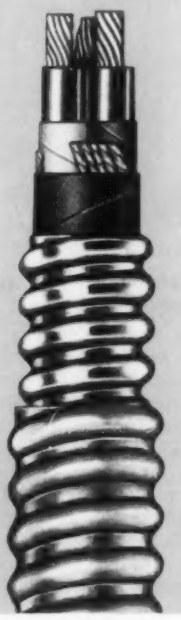
No-duct range hood is designed to eliminate cooking problems of smoke, grease and odors, maker says. 4-speed fan pulls grease-laden air into aluminum mesh filter directly above range. Two other filters remove smoke and odors. Available in 30-in, 36-in, and 42-in widths in aluminum, copper anodized aluminum, copper enamel, antique copper enamel and stainless steel. • **NuTone Inc., Cincinnati, Ohio.**



C-L-X INTEGRATED CABLE SYSTEM

Requires no separate Duct or Conduit in any environment

Unusual pliability of C-L-X Sheathed Cables is shown here as the cable is being installed.



The revolutionary C-L-X Continuous, Corrugated, Lightweight, metallic sheath, that Simplex introduced to this country two years ago, is now available in *Aluminum*, *Copper* or *Bronze* as well as the enormously successful *Steel*.

Simplex C-L-X pliable cable systems provide unexcelled ease of installation and mechanical protection.

The *corrugated* metal sheath combines pliability for ease of installation with very great strength and seals the cable against penetration by oil, chemicals and moisture.

Depending on the environmental conditions of the installation, these power, control and communication cable systems can be furnished with or without plastic jacketing.

Light, and pliable, C-L-X cables are easily installed, and require no special reels.

Now, with corrugated *Aluminum*, *Copper* or *Bronze* sheathed C-L-X cable systems, the low resistance of these metals permits designs where the sheath may be used as a neutral or ground. These metals also permit the use of single as well as multiconductor cable assemblies in a-c power systems.

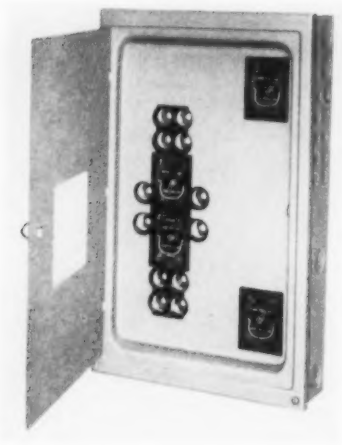
For complete details on C-L-X sheathed cables, contact your Simplex Engineer, or write direct.

See C-L-X in Steel, Copper and Aluminum at the PLANT MAINTENANCE SHOW BOOTH NUMBER 212

Simplex

WIRE & CABLE COMPANY

79 Sidney Street, Cambridge, Massachusetts



Fuse Puller Panel

Unit provides 30-amp independent sealable puller

New 100-amp parallel-connected fuse puller panel with 12 plug fuse branches and four branch pullers, one of which is sealable for use with separately metered equipment now available. Unit incorporates 60-amp main puller for all plug fuse lighting and appliance circuits, another 60-amp puller for range, and two 30-amp branch pullers. One of 30-amp pullouts is independent of main bussing and located in sealable compartment. • **Circuit Protective Devices Dept., General Electric Co., Plainville, Conn.**

Light Control

Photo electric light switch has positive switching action

Unit has aluminum enclosure and weatherproof construction. Jointed mounting stem permits easy installation to standard electrical fittings, maker says. Built-in deflecting shield guards photo cell from false activating sources of light. Rated at 650-w, 115-v, 60 cycle operation. • **Com-pak-ett Mfg. Co. Allegan, Mich.**

Bulbs

Electric bulb gives aura of gas flame illumination

Called "Flamescent" bulb, it gives concept of gas flame illumination. Designed in several shapes, it features unique finish which, with special interior construction, creates the charm of gas flame lighting. Cooling crown shape 25-w to 150-w, torch shape standard base 15-w to 25-w, and torch shape candelabra base 8½-w. • **Duro-Lite Lamps, Inc., subsidiary Duro-Test Corp., North Bergen, N. J.**

Power-Fuse Lift Stick

Removes and installs power fuses too heavy for hookstick handling

Equipped with system of ropes and pulleys, lift permits operator to lower and raise power fuse. Tool is hung on top insulator of fuse mounting by means of shepherd hook attachment. Thus weight of tool and fuse is supported by fuse mounting, maker says. Disconnect prong is provided on tool for opening and closing fuse and carrier for lowering and raising fuse. Available in 12-, 14-, 16-, and 18-ft lengths with insulating wood pole. • **A. B. Chance Co., Centralia, Mo.**

Electric Heat Control

Unit designed for complete remote control of systems

Designed for use with baseboard heaters or fan-forced heaters, this low voltage remote 2-heat (hi-lo) control system makes it possible to regulate temperature of all rooms individually and remotely from central control panel, according to manufacturer. Double-setting thermostat permits switching to "high" for immediate increased heat and "low" for decreased heat. As many as 56 separate units can be controlled from one remote control panel. • **Markel Electric Products, Inc., Buffalo, N.Y.**

Reflectors

New series of medium and high mounting type in porcelain enamel

All-white porcelain enamelled medium and high mounting reflectors for RLM specifications 4A, 4B and 4C. Reflectors are 16-in and 18-in diameters and accommodate various lamp sizes. Combinations of these reflectors and hoods provide medium and high mounting units for 400-w mercury and incandescent lamps from 300 to 1500-w. Units have top ventilation with protective aluminum drip shield. • **Quadrangle Mfg., Co., Chicago, Ill.**

Switch

Offered in 6-station model for pendent applications

Unit is completely contained within specially molded two-piece enclosure that features waterproof, non-corrosive and lightweight construction, according to manufacturer. Each button is integral part of housing and completely encloses each of six snap-action switches. Ring-shroud protects each button from accidental action from any side direction. • **Electrical Products Div. Joy Mfg. Co., St. Louis, Mo.**

Lamp Holders

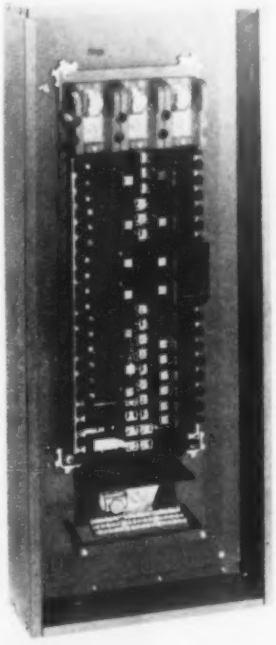
Made of die-cast aluminum with built-in splice chamber

New line of PAR-38 and R-40 lamp holders are now available. Units designed for easy accessibility, maker says, constructed of die cast aluminum and each has its own built-in splice chamber. • **Killark Electric Mfg. Co., St. Louis, Mo.**

Potentiometers

Three models designed to be base or one-hole mounted

Units, said to be oil-tight, available in 3 models—a single element, 2-w potentiometer, a dual element 2-w potentiometer and single element, 25-w potentiometer. Operating knob, indicator ring and sub-panel operator are independently adjustable. • **Cutler-Hammer Inc., Milwaukee, Wis.**



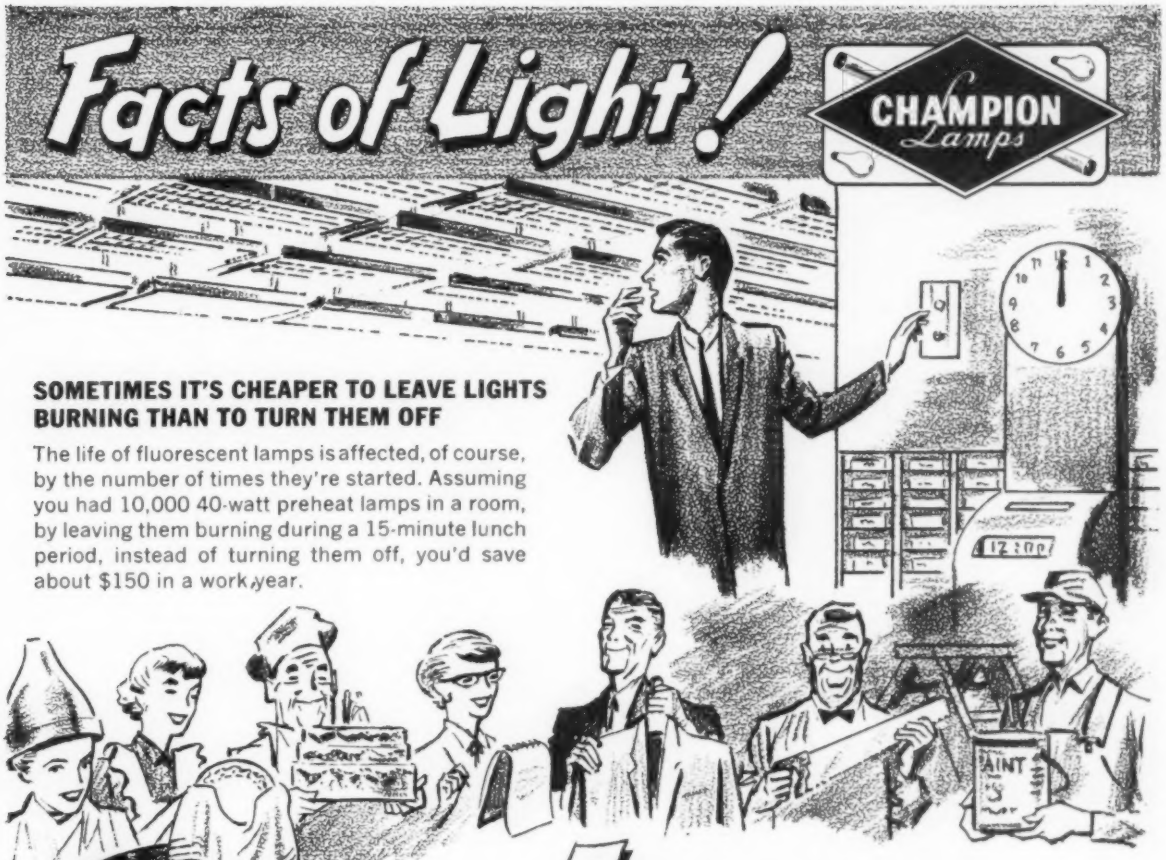
Load Center

Can be used for commercial and industrial applications

Unit has double bus design that is said to increase circuit capacity. By having 4 rows of breaker plug-in slots, unit permits 100-amp breakers to be mounted opposite each other. Space for 28 to 42 circuits is allowed. Available in single or three phase. By proper combination of panels and 1, 2, and 3-pole breakers, power panel applications up to 400-amp mains, 240-v, and branches of 100-amp can be met. • **Federal Pacific Electric Co., Newark, N.J.**

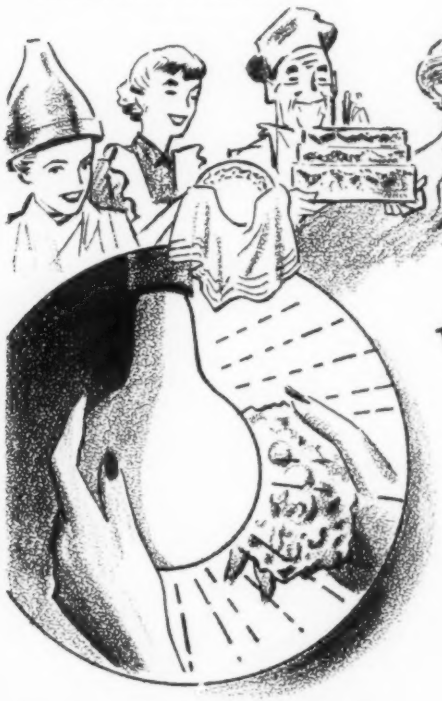
Facts of Light!

CHAMPION Lamps



SOMETIMES IT'S CHEAPER TO LEAVE LIGHTS BURNING THAN TO TURN THEM OFF

The life of fluorescent lamps is affected, of course, by the number of times they're started. Assuming you had 10,000 40-watt preheat lamps in a room, by leaving them burning during a 15-minute lunch period, instead of turning them off, you'd save about $150 in a work year.

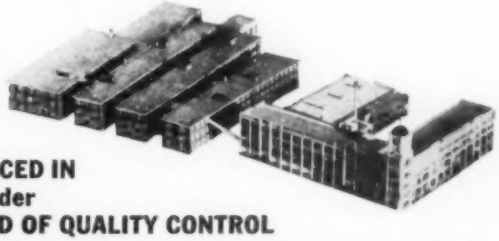


A LITTLE SOAP AND WATER CAN STOP THE LOSS OF HALF YOUR LIGHT

Dust and dirt allowed to accumulate on lamps and fixtures can reduce the light they produce by nearly 50%. The owning and operating cost remains constant. By knowing how fast light is depreciating, it is easy to figure amortization and power waste and establish a cleaning program that gives you maximum lighting economy.

THERE ARE 7 DIFFERENT SHADES OF "WHITE" IN FLUORESCENT LAMPS

All seven basic "white" colors are needed to satisfy the color demands of a wide variety of commercial and industrial lighting users. The "cool" colors: Daylight, Cool White and DeLuxe Cool White are good for color matching. The "warm" colors: Warm White, DeLuxe Warm White and Soft White approximate the color of incandescent lamps and accentuate the reds. Plain "White" offers the best efficiency and is used where no particular color "atmosphere" is needed.

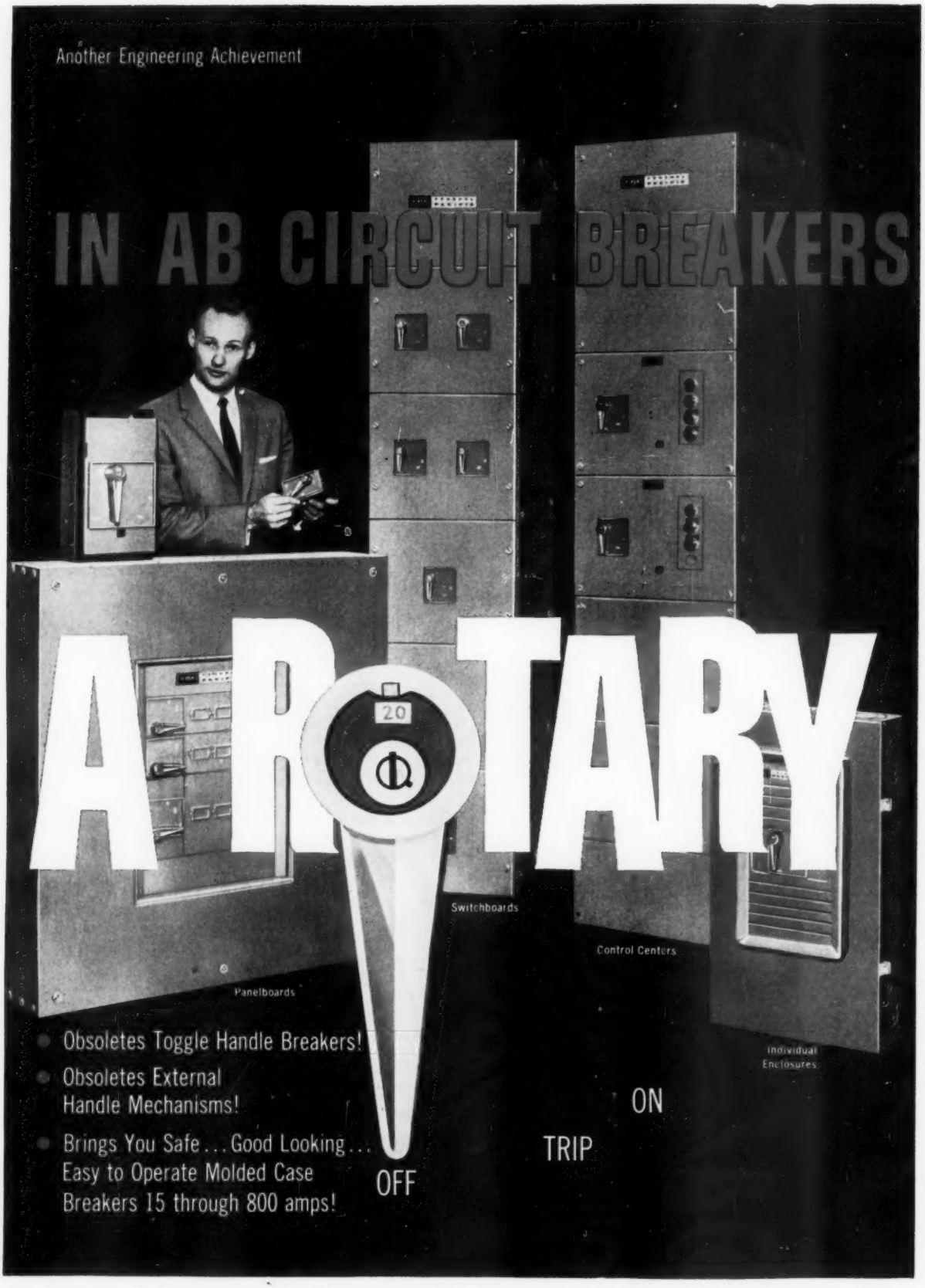


3,000 DIFFERENT TYPES OF LAMPS ALL PRODUCED IN 1 PLANT under 1 STANDARD OF QUALITY CONTROL

Champion has continuously produced top quality lamps since 1900. All research, development, manufacturing and test facilities are concentrated in one modern plant . . . all dedicated to provide you with light at lowest cost.

CHAMPION LAMP WORKS, Lynn, Massachusetts

CHAMPION INCANDESCENT-FLUORESCENT • *YOUR BEST BUY IN LAMPS*


Another Engineering Achievement
IN AB CIRCUIT BREAKERS
A ROTARY
20
Switchboards
Control Centers
Panelboards
Individual Enclosures
Obsoletes Toggle Handle Breakers!
Obsoletes External Handle Mechanisms!
Brings You Safe... Good Looking... Easy to Operate Molded Case Breakers 15 through 800 amps!
ON
TRIP
OFF

FIRST REAL CHANGE IN AB BREAKERS SINCE 1927*

NEW Ease of Operation — Smooth, easier throw... no more cumbersome handle extension.

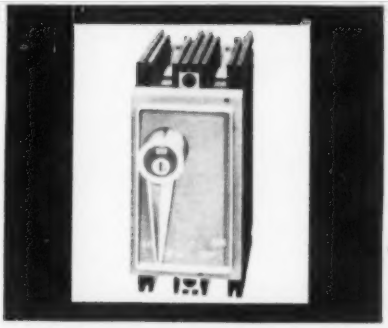
NEW Safety—Rotary handle mechanism is a built-in part of the breaker. Assures positive indication... positive operation.

NEW Economy— Eliminates excess linkage. Means simpler installation, reduced maintenance... as well as greater safety.

NEW Locking Feature — Key-handle lock off is standard...accommodates three padlocks as well.

REVOLUTION

Plus a NEW Look—Breaker face styled by Raymond Loewy Associates for best appearance in any location.



Write today for illustrated Bulletin #1425, Federal Pacific Electric Company, General Offices: Dept. 403, Newark 1, New Jersey.

*In 1927 the first practical molded case circuit breaker was introduced. It established the general standard that was to govern circuit breaker design for the next 32 years. Now—through imaginative engineering, Federal Pacific establishes a new standard.

FPE **FEDERAL PACIFIC ELECTRIC COMPANY**

The Best in Electrical Distribution and Control Equipment

WHITNEY BLAKE

DYNAPRENE®

PORTABLE CORD

OPENS UP NEW MARKETS

Wholesalers who stock and sell Whitney Blake DYNAPRENE Portable Cord find new markets open to them with other WB products purchased by industry, institutions, municipalities and others . . . It's worth investigating.

DYNAPRENE Portable Cord provides premium service to your customers at a price that is competitive yet provides a comfortable margin of profit.

Write today for this complete catalog . . . free of course.

WB

Well Built Wires Since 1899

WHITNEY BLAKE COMPANY

NEW HAVEN 14, CONNECTICUT

Simplify interlocked armored cable installations

WITH NEW T&B FITTINGS

Each size of the new T&B Interlocked Armored Cable Fittings accommodates twice the previous range of cable sizes. They eliminate the problem of armored cable OD that is too large or too small for the fitting. The extra armor stop in T&B Interlocked Cable Fittings and the independently-bolted twin saddles make it possible to accommodate a wide range in armor diameters. The saddles are serrated for positive grip.

For dry or wet locations – T&B Armored Cable Fittings are available for both terminating in boxes or dead-ending, in both dry and damp locations. (Damp location fittings have a neoprene bushing, retainer ring and gland nut to keep out moisture.)

Other advantages: **1)** Fewer connectors are required to accommodate the full range cable sizes. Fewer items in stock. **2)** There is only one connector for each hub thread size. **3)** The basic connector and its accessories are engineered to achieve LOWEST INSTALLED COST.

All T&B products available only through authorized T&B distributors

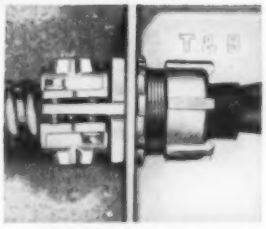
THE THOMAS & BETTS CO.

T&B ENGINEERED

20 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts, Ltd.,
Montreal, P.Q., Canada

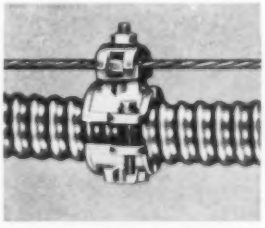
MANUFACTURERS OF FINE ELECTRICAL FITTINGS SINCE 1898

THE BASIC FITTING . . .
and T&B accessories readily solve specific installation problems . . .

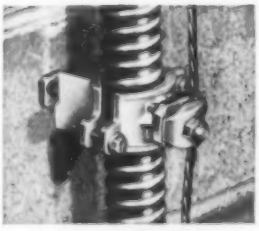


FOR WET LOCATIONS

FOR GROUNDING



FOR HORIZONTAL SUPPORTING



FOR VERTICAL SUPPORTING

For complete details, with case histories on how these new T&B fittings have solved the problems of others, we will be pleased to have you participate in our informative "Eyeopener" mailing program. Simply fill out and return the coupon below.

The Thomas & Betts Co., Inc., 20 Butler St., Elizabeth 1, N. J.

Please include my name for your "Eyeopener" series about T&B Interlocked Armored Cable Fittings.

T&B ENGINEERED

My name _____

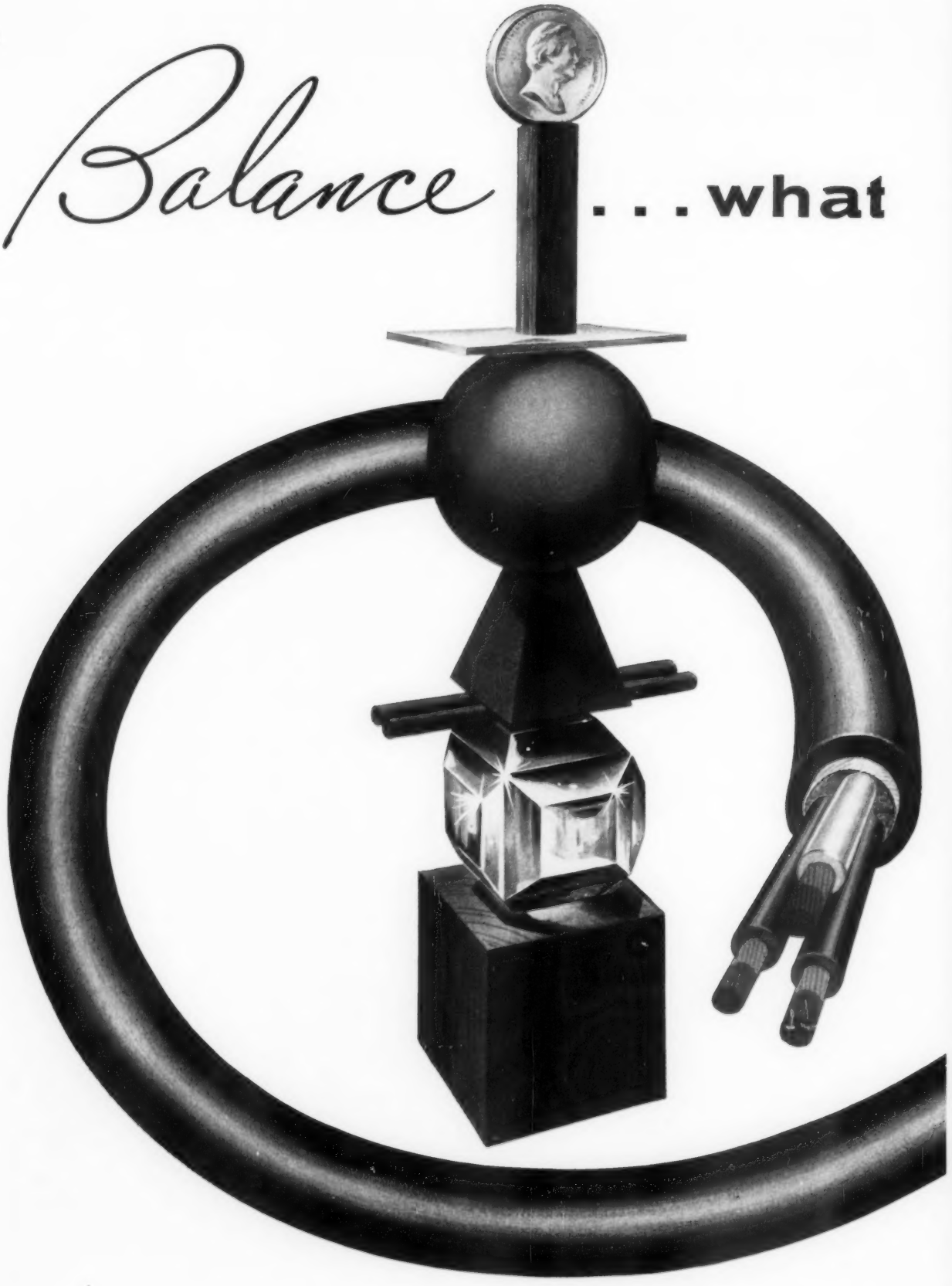
Title _____

Company name _____

Street _____

City & State _____

Balance . . . what



does it mean in cable?

No one characteristic alone determines good cable. Rather its the *right* balance of many qualities that determines the quality, performance and service life of the cable you buy. Carol *has* this balance, as can be seen in the table.

You will note that Carol not only has the highest *overall* rating on the characteristics considered, but has placed *primary* emphasis on the qualities most vital in cable life and performance.

The Carol concept of proper *balance* of characteristics means you get exceptional flexibility . . . longer cable life under even the most extreme conditions . . . because you are assured of superior quality *throughout—extra* quality and performance where it is most critically needed.

Note how needlessly high cold flexibility can be built into cable, as in Brand B, but only at the sacrifice of more important electrical properties, such as insulation resistance. And in Brands A, B and C the lack of *balance* between abrasion resistance and ozone resistance means that, in today's increasingly ozone rich atmosphere, these cables can crack long before they would normally wear out. Years of experience and research go into the *balance* built into every Carol cable.

	BRAND			
	CAROL	A	B	C
Electrical Insulation Resistance (1)	100	17	16	68
Cold Bend °F (2)	−50	−45	−90	−50
Abrasion Resistance (1)	91	62	100	92
Ozone Resistance (1)	100	6	18	12

Note: (1) 100 indicates best—others % of best
(2) cold bend—actual test temperature

when you call for cable— call for Carol

Carol®

CAROL CABLE COMPANY

Division of the Crescent Co., Inc., Pawtucket, R.I.

PORTABLE CORDS • POWER SUPPLY CABLE • CONTROL CABLES • WELDING CABLE • GOVERNMENT TYPES • CORD SETS

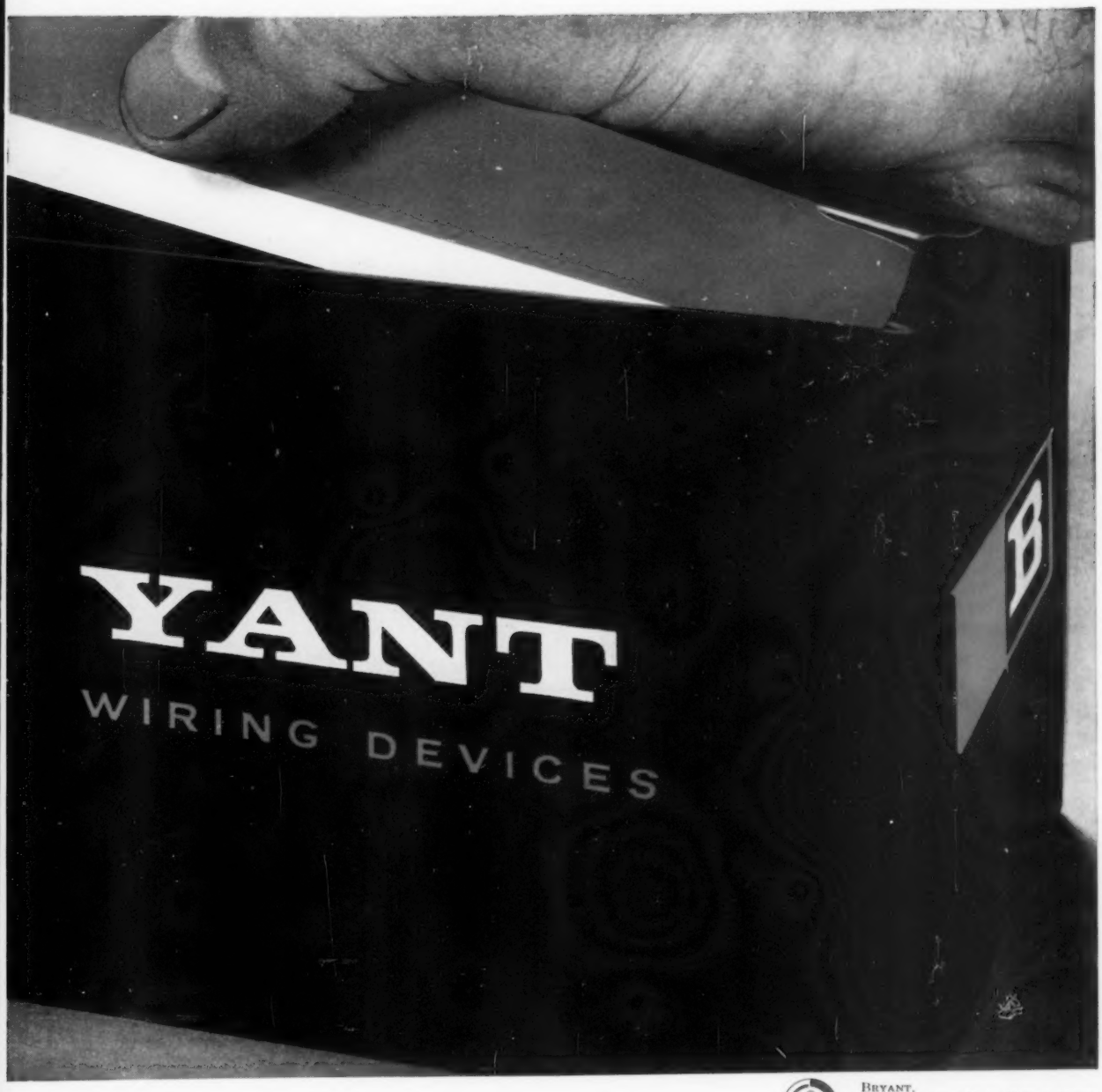
What's in the package for you?

Good Service, year in and year out. Bryant Order Service people have done an outstanding job of handling each order. However, Bryant wants to constantly better its service to customers. For this reason, we have acquired RAMAC—an electronic "genius" that processes incoming orders, makes correct billing and issues shipping instructions in about the same time it takes to read this sentence. With RAMAC, you can be sure that our good service will continue as we grow.

Sales Help that extends far beyond printed material. Your Bryant representative helps you cultivate customers . . . depend on him.

Firm Sales Policy... we don't sell to everyone. But those to whom we do sell enjoy our firm distributor-oriented policies.

Product, of course—a *complete line* of superior wiring devices. New product



BRYANT,
WINNER OF THE GOLD MEDAL AWARD
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ideas, too, like the dramatic new Bryant Fashion Plate* and Tap-eez*.

Quality... every wiring device is engineered, designed and manufactured to the highest standards of quality and workmanship . . . insuring the ultimate in lasting service for all Bryant products.

What's in the new Bryant package? The products, the service to help you and your salesmen create more sales. J-99022

*Trade-Mark

B

BRYANT

THE BRYANT ELECTRIC COMPANY
BRIDGEPORT 2, CONNECTICUT

Scrutiny

BY ROME'S INSPECTION DEPARTMENT

Rigid inspections of the Rome wire and cable products you sell insures customer satisfaction . . . and confidence in *you!*

How's it done? By a whole *department* of inspectors, separate from Production and Sales. Their job: make sure *all* Rome products are *quality* products.

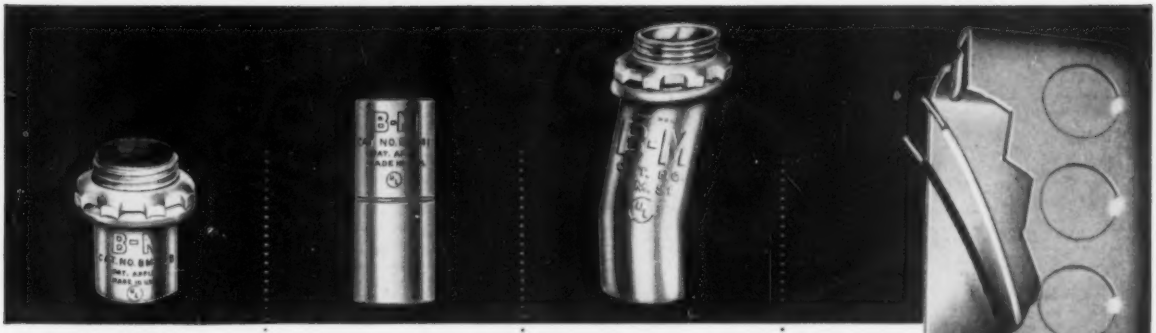
To keep up to date on the complete line of Rome quality products, see The Man from Rome—your Rome Cable salesman. He can detail "quality" in every Rome product . . . for you or your customers.

4 MORE WAYS ROME CABLE SUPPORTS YOU

1. **ADVERTISING.** Your selling job is made easier by Rome's national advertising program—one of the industry's largest.
2. **RESEARCH.** Constant research provides you with the latest developments, continually broadens the line.
3. **SERVICE.** Rome salesmen will be glad to work hand in hand with your own salesmen on unusual jobs.
4. **ENGINEERING.** Rome engineers provide technical advice to help *you* help your customers.

ROME CABLE
DIVISION OF **ALCOA**

MEET THE MAN
WHO'S DEDICATED TO **YOUR** JOB
YOUR ROME CABLE SALESMAN



Red Throat
BM-21B
½" Connector
BM-22B
¾" Connector
BM-23B
1" Connector

BM-41
½" Coupling
BM-42
¾" Coupling
BM-43
1" Coupling

BM-51
½" Offset Connector
BM-52
¾" Offset Connector

BM Offset Connectors showing how wires are guided over box edge.

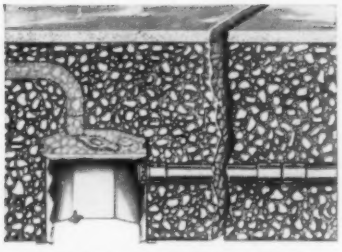
SAVE IN SIXTY

Save time and money with

B-M ORIGINAL INDENTER FITTINGS

Here is the combination that is unbeatable when it comes to easier E.M.T. installation at less cost. New lightweight plier size indenters make setting up thin wall conduit a breeze. B-M fittings are neater too! No unsightly nuts or projecting set screws.

A few more of the plus features of B-M fittings are Concrete tight—Vibration resistant—Extra heavy bright zinc plate, salt spray and acid drip tested for corrosion resistance—Extra heavy positive bonding locknuts—smooth rounded edges or bushed throat type connectors that prevent insulation damage—All steel construction with extra heavy gauge wall thickness.



ALL BRIEGEL FITTINGS ARE U. L. APPROVED AS CONCRETE-TIGHT

When setting E.M.T. in concrete you can make each job easier and more profitable by using Briegel All Steel Indenter Fittings that have UL approval as Concrete-Tight. Contractors everywhere recognize their cost cutting qualities and the fact that they make each wiring job a better job. It is only natural that Briegel Fittings are the most widely used E.M.T. connectors and couplings.

BM PLIER SIZE INDENTERS
BM—No. 607 ½"
BM—No. 608 ¾"
BM—No. 609 1"

UL

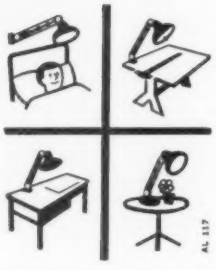
TELESCOPE BM SYSTEM

All B-M indenter type fittings far exceed the requirements of U. L. file card E 10863 and Federal Specifications W-F-406.

BRIEGEL METHOD TOOL CO.
GALVA • ILLINOIS

USED THE MOST FROM COAST TO COAST

PROFIT in desk lighting is the boldest achievement of America's best designed incandescent-fluorescent lamp... Amplex Trombolite! This unique lamp with its ingenious tilting, swinging, spinning, swiveling, extending lamp core puts the right light where it's needed most. You profit in sales to homes, offices, plants, work rooms with Trombolite's four different models in five different colors. Read about the profitable story, today, in our newest brochure. *Desk models—$34.25 less lamps*



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TROMBOLITE

Write for new brochure:
Amplex Corporation
214 Glen Cove Rd.
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CRESCENT

SERVICE ENTRANCE CABLE

With *Mylar* Tape

Gives Greater Flexibility—Faster, Neater Installation

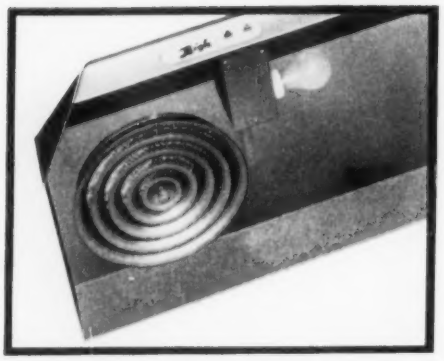
A color-coded MYLAR Tape is used over the rubber insulation of each conductor, giving excellent protection at terminations. A MYLAR Tape is also used over the concentric neutral conductor, which keeps the strands clean, insuring a fast good connection at lowest installed cost

*DU PONT Reg. T.M.

CRESCENT INSULATED WIRE & CABLE CO., INC.

OVER 75 YEARS EXPERIENCE

TRENTON, NEW JERSEY



YOU CAN SELL THIS NEW Leigh RANGE HOOD FOR LESS THAN $21.50!

No. 5400 Series — available in 30, 36 and 42 inch widths

As advertised in HOUSE & HOME

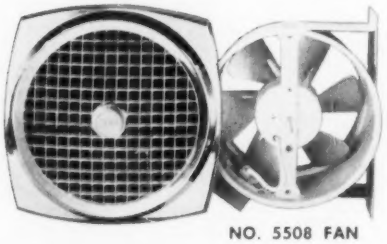
Only the new LEIGH No. 5400 Series RANGE HOODS feature such beautiful styling . . . to complement the very finest of homes . . . yet perfectly priced for budget kitchens!

- **LOW COST** — priced far below all competitive Range Hoods
- **QUALITY CONSTRUCTION** — made of the finest materials, by experienced craftsmen — engineered to provide a *house-time* of dependable service
- **DECORATOR STYLING** — to conform with any kitchen interior — features a rich, copper-tone finish

Ask for Bulletin No. 264-I.

LEIGH BUILDING PRODUCTS
Division of Air Control Products, Inc.
2960 Lee St. Coopersville, Michigan

You can sell this new Leigh ventilating fan for less than $10.00



NO. 5508 FAN

- Fits 8" pipe without additional cost of an adapter
- Easily installed without framing
- Lifetime mirror-like plated grille of high-impact Polystyrene
- Powerful, completely-enclosed motor

Ask for Bulletin No. 266-I.

Leigh

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Outdoor Accessories — Ventilators
Ventilating Fans — Range Hoods
Folding & Sliding Door Hardware

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WORLD'S MOST WIDELY USED ELECTRICAL TEST INSTRUMENTS

AMPROBE®

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AMPROBE RS-3

5 current ranges. 3 voltage ranges. Ohmmeter specially designed for the maintenance field. Rotary scale for faster reading and greater accuracy. Pointer-Lock "freezes" pointer at reading. Advanced printed circuitry laughs at rough handling. Advanced movement design—new internal core magnet with self shielding characteristics. By itself, the Amprobe RS-3 handles 98% of your test needs. With the Amprobe Deca-Tran and Ampro3o Energizer it covers EVERY testing situation.

Only **$52.50**

AMPROBE RS-1

The economy snap-around volt ammeter with many features of the great RS-3 including rotary scale, pointer lock, printed circuit, and advanced movement design. 4 current ranges. 2 voltage ranges.

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The advanced voltage tester that gives you current, too. Available in seven models, ranging from 10 amps to 100 amps in either 125/250 or 150/600 volts. Choose the model that fits your job.

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Makes your Amprobe the world's most flexible and versatile electrical test instrument. Extends amperage reading 10 times. Gets readings as high as 1200 amps.

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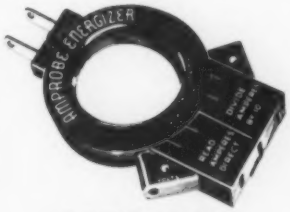

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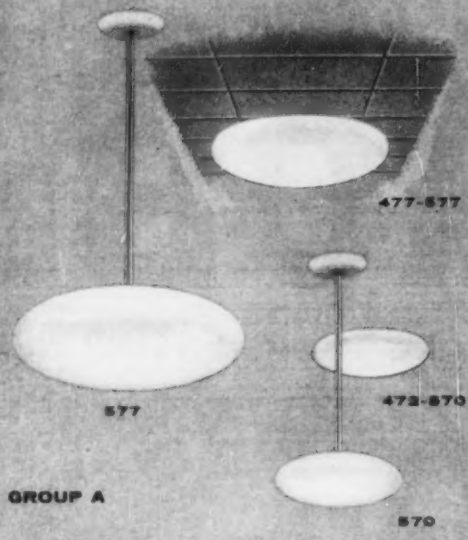
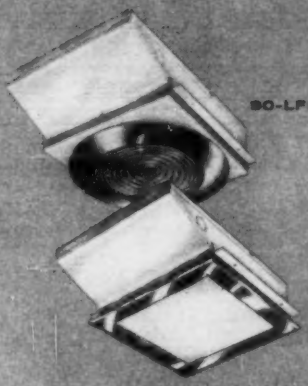
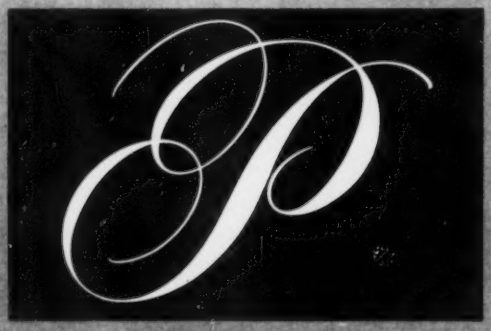
A Few Lighting Fixtures from the **PRESCOLITE** *NEW PRODUCT PARADE*

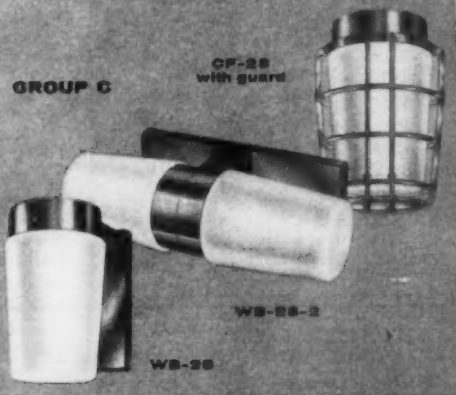
Group "A" "Satellite"—a new departure in beautiful, hand blown "Thermopal" glass used with pendant fixtures or on recessed housings.

Group "B" A new concept in recessed lighting for specific use in concrete construction.









GROUP D

Group "C" The original weather proof, "Dielux" diecast aluminum bracket and ceiling lights now in 150-200 watt sizes. Hand blown "Thermopal" glass. Available with diecast aluminum guard.

Group "D" Round and Square Drum fixtures with hinged "Dielux" diecast canopy. Hand blown "Thermopal" glass.

Write for more complete information.

PRESCOLITE MFG. CORP., 2229 Fourth St., Berkeley, Calif.
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this is HICKORY N.C.
DISTRIBUTORS
To help you sell Advance Ballasts this ad is appearing in leading publications to Contractors, Engineers, Architects and users of fluorescent lamp ballasts. If you are not participating in this Service-Stocking Distributor program, contact your Advance Representative or write for details.

OVER 1000 AUTHORIZED ADVANCE SERVICE-STOCKING DISTRIBUTORS DISPLAY THIS PLAQUE

In Hickory, North Carolina, and in hundreds of other cities in the U.S.A., there is an Authorized Service-Stocking Distributor to supply ADVANCE fluorescent lamp ballasts for immediate replacement.

Now it is easier than ever to get immediate replacement service for any make fluorescent lamp ballast whenever replacement is necessary. Over 1000 ADVANCE Service-Stocking Distributors throughout the United States have been authorized to display the sign at the left. They carry a complete stock of all ADVANCE ballasts, individually packaged.

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This is what you can SAVE...

That's right! The electrical engineer for a leading contractor figured this: You can save as much as 630 feet of wire and 160 feet of conduit in lighting a 50' x 54' area, using fixtures equipped with Certified CBM ballasts.

when fixture BALLASTS wear this emblem...

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CBM Ballasts are checked by tests regularly, at E.T.L.

And there are other benefits too . . . such as peak light output, long lamp and ballast life, positive starting, dependable service. Because CBM ballasts are made to definite specifications . . . checked and certified by ETL. And of course, they're UL listed. It pays to specify fixtures with CBM ballasts. For the latest dope, ask us to send you CBM News.

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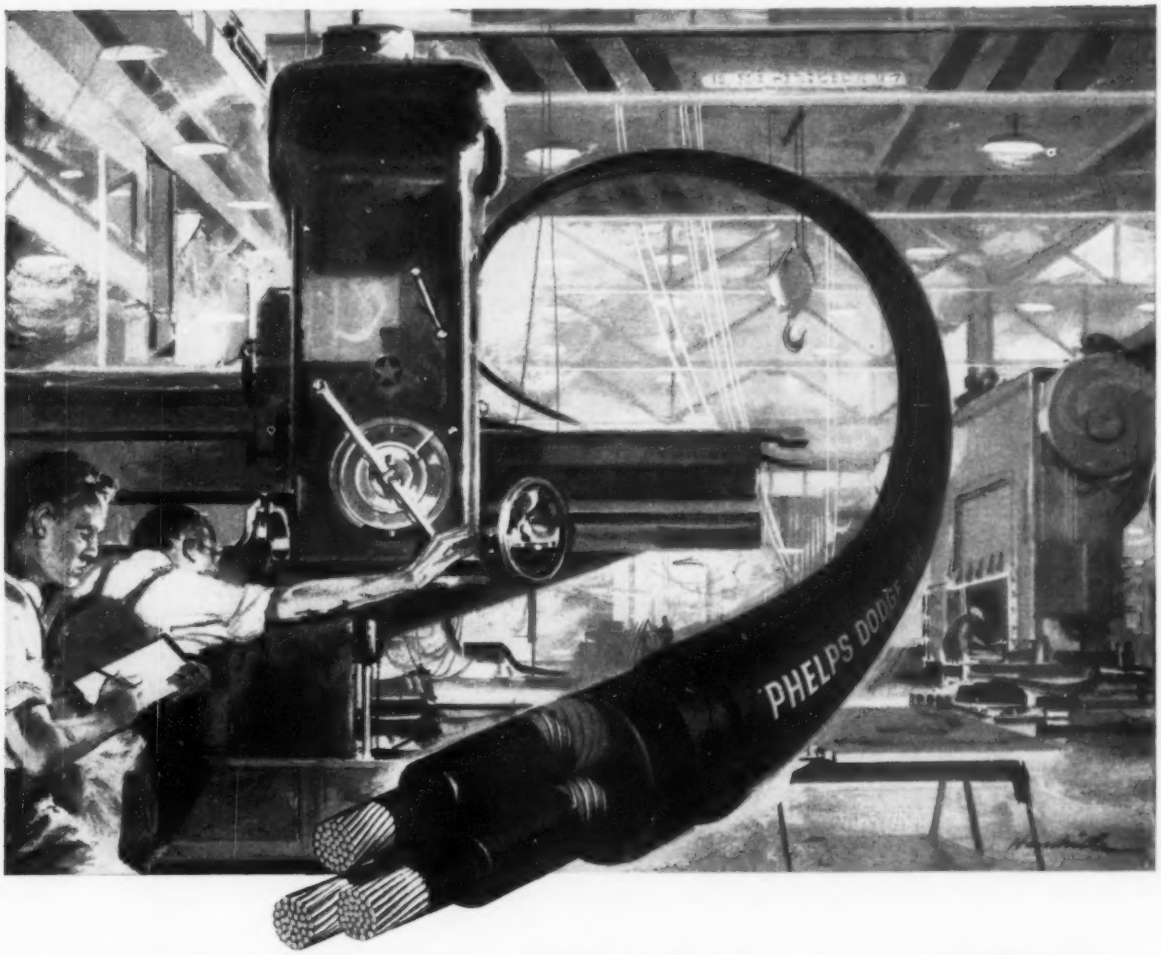
Participation in CBM is open to any manufacturer who wishes to qualify.

Steady plant production demands dependable power cable . . .



HABIRITE-HABIRPRENE CABLE gives unexcelled performance!

To help assure uninterrupted production, modern industrial plants require reliable cables for delivering electric power to production lines. The service reliability of Phelps Dodge *Habirite-Habirprene* is unsurpassed by any other rubber insulated neoprene jacketed type RR cable.

Habirite-Habirprene is a combination of specially engineered butyl rubber insulation and neoprene jacket. The overall features of this cable provide greater resistance to heat, oxidation and ozone; improved electrical properties, including superior insulation resistance; higher copper operating temperature; superior flexibility; improved mechanical toughness against damage from installation hazards and extra resistance to corona, an absolute necessity for high-voltage neoprene jacketed cable.

As a general purpose cable, *Habirite-Habirprene* assures the utmost in safety, durability and reliability.

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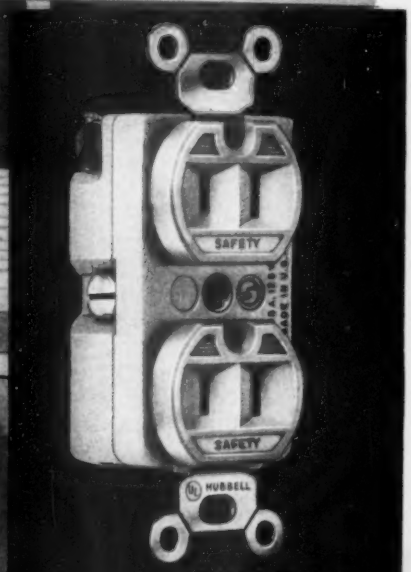
IT PAYS TO HAVE HUBBELL GOOD CONNECTIONS

NOW THEY'RE BOTH



SG-62-I (Safety Grounding) Duplex Receptacle 15 ampere, 125 volt

EXTRA SAFETY FOR

HOMES
SCHOOLS
NURSERIES
HOSPITALS
SANITARIA
PRISONS
WORKSHOPS
GARAGES

...SAFE

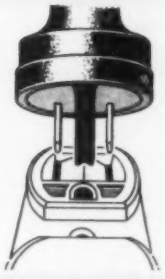
NEW HUBBELL TWINSAFE

SAFETY GROUNDING RECEPTACLE

- PROVIDES GROUNDING PROTECTION FOR USERS OF ELECTRICAL TOOLS AND EQUIPMENT
- SHUNTS CURRENT HARMLESSLY AWAY FROM OBJECTS INSERTED IN SLOTS BY CHILDREN

Only Hubbell "TWINSAFE" provides these 2 Safety Features

FIG. I—A slot for grounding power tools and appliances equipped with plugs having U-shaped grounding blade.



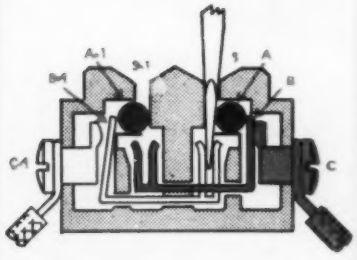


FIG. II.—Internal construction that shunts current harmlessly away from inserted metallic objects. Red indicates parts carrying current.

You will find *two* safety features in the new Hubbell "Twinsafe" receptacle that are combined in no other convenience outlet today:

A U-shaped grounding slot that instantly grounds power tools and appliances equipped with any standard grounding cap, as in Fig. 1.

A design that permits current to flow out through the slots only when both blades of a standard cap are firmly in place.

If, as shown in Fig. 2, a metal object thicker than 0.031″ is inserted in one slot, it causes fibre insulating disc A to press against spring B, causing B to touch C, which is the power supply. But instead of the power's flowing to clip B_1 which the inserted object is touching, "Twinsafe" construction shunts the power harmlessly to the opposite slot. (Note that, on the side of the idle slot, spring B_1 is not touching power supply C_1 because disc A_1 is not pressing against it.

Protection is complete even if a child tries to insert both points of a hairpin in the two slots at once. The insulating discs are so positioned as to make entry difficult. Furthermore, for the discs to be moved enough to establish the internal electrical contact, the inserted object must be more than 0.031″ thick—which the leg of a hairpin is not.

The Hubbell "Twinsafe" receptacle SG-62 for 15-ampere, 125-volt current costs only a trifle more than ordinary equipment, but it is worth many times the difference in added safety and peace of mind. In schools, mental institutions, hospitals, prisons, and similar structures, use of "Twinsafe" is practical insurance against tragic accidents.

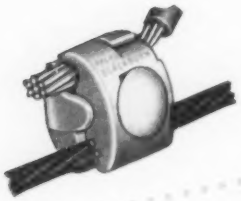
"Twinsafe" receptacles fit standard outlet boxes and are installed by qualified electrical contractors.

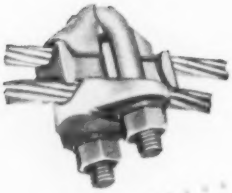
HARVEY HUBBELL, INCORPORATED

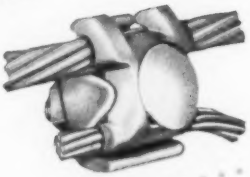
BRIDGEPORT 2, CONNECTICUT IN CANADA, SCARBOROUGH, ONTARIO

L. E. (RED) SALMON Says . . .

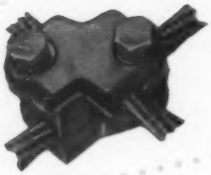
ALUMINUM FITTINGS

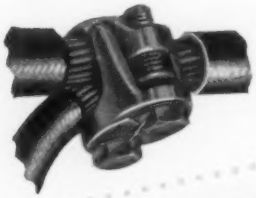




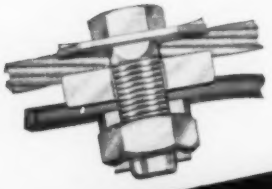


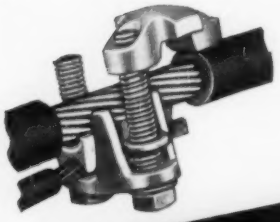
HIGH PRESSURE CONNECTIONS FOR COPPER





GENERAL PURPOSE CONNECTORS





BLACKBURN —a complete line . . .

BLACKBURN *Electrical* EQUIPMENT

FAST DEPENDABLE SERVICE FROM OUR CENTRALLY LOCATED FACTORY

JASPER BLACKBURN CORPORATION

Everybody talks about service-but Blackburn does something about it!

the qua... for the future insta...

We find that the services of su... the quality of Blackburn products are ... which means that Blackburn has the complete l...

We have built our business here at Tennessee Valley on service --- we pride ourselves on the service we give our customers --- and it is nice to do business with suppliers who render this same type of service to us. Well, to rephrase old Mark Twain a little bit, "Everybody talks about service but Blackburn does something about it."

Sometimes it is hard to find a supplier that gives you the kind of service you want and yet has the kind of quality you want to sell. That's the main reason we carry Blackburn's complete line.

Thanks for the cooperation you have given us these many years.

Sincerely,
L. E. (Red) Salmon
President

L. E. (RED) SALMON, PRESIDENT
TENNESSEE VALLEY ELECTRIC SUPPLY COMPANY
Memphis — Nashville — Little Rock

designed with the distributor in mind

TERMINAL LUGS AND SPLICERS

GROUNDING DEVICES

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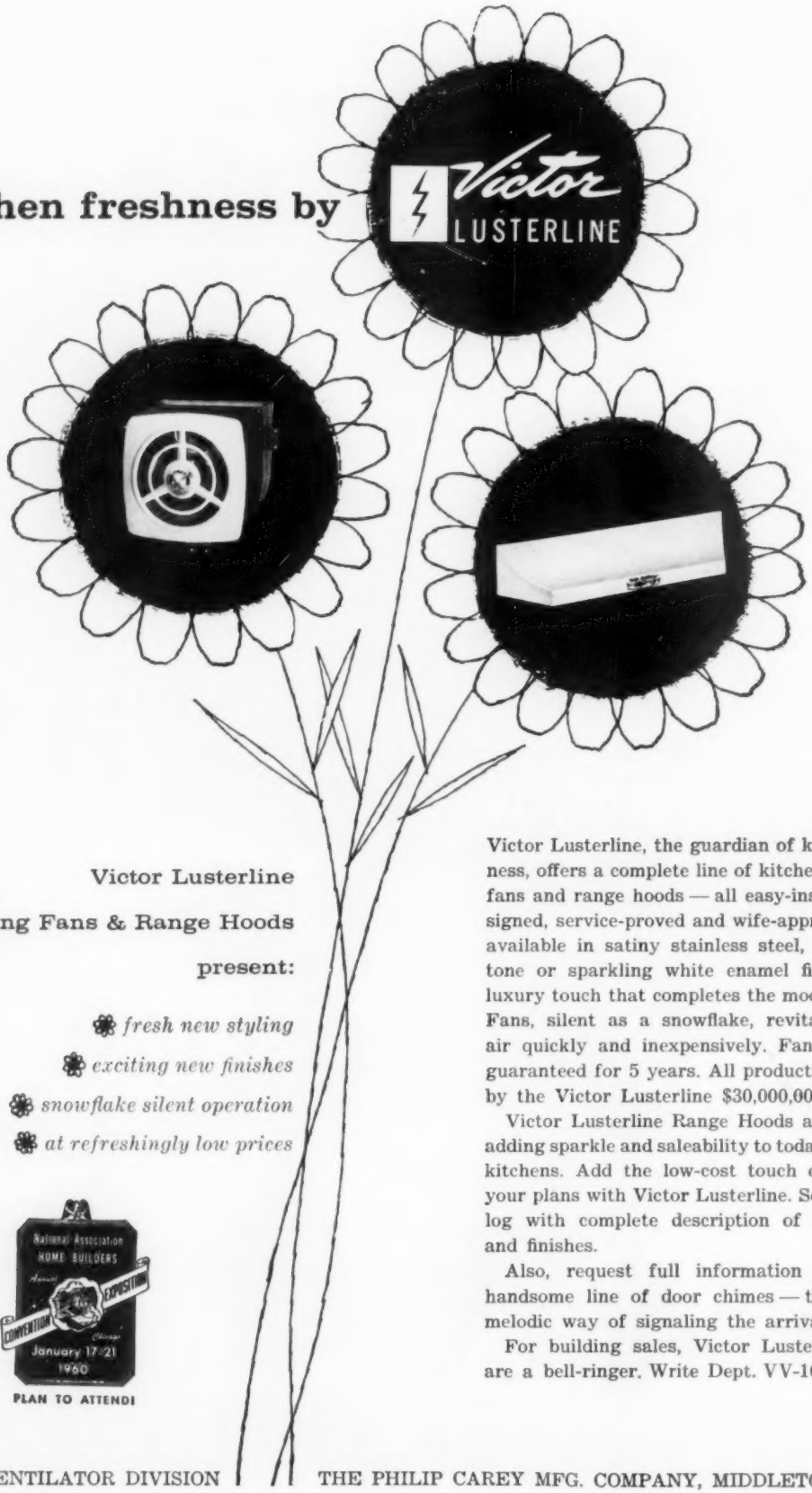
Kitchen freshness by Victor LUSTERLINE



Victor Lusterline
Ventilating Fans & Range Hoods
present:

- *fresh new styling*
- *exciting new finishes*
- *snowflake silent operation*
- *at refreshingly low prices*

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PLAN TO ATTEND!

Victor Lusterline, the guardian of kitchen freshness, offers a complete line of kitchen ventilating fans and range hoods — all easy-installation designed, service-proved and wife-approved. Hoods available in satiny stainless steel, rich coppertone or sparkling white enamel finishes — the luxury touch that completes the modern kitchen. Fans, silent as a snowflake, revitalize kitchen air quickly and inexpensively. Fan motors are guaranteed for 5 years. All products are backed by the Victor Lusterline $30,000,000 Warranty.

Victor Lusterline Range Hoods and Fans are adding sparkle and saleability to today's brightest kitchens. Add the low-cost touch of luxury to your plans with Victor Lusterline. Send for catalog with complete description of styles, sizes and finishes.

Also, request full information on Victor's handsome line of door chimes — the gracious, melodic way of signaling the arrival of guests.

For building sales, Victor Lusterline chimes are a bell-ringer. Write Dept. VV-160

VICTOR VENTILATOR DIVISION | THE PHILIP CAREY MFG. COMPANY, MIDDLETOWN, OHIO

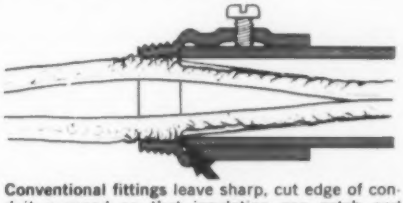
HERE IS BIG NEWS FROM Conduit Fittings

THE NEW STEEL SET SCREW CONNECTOR THAT ELIMINATES INSULATION DAMAGE DURING PULL-THROUGH

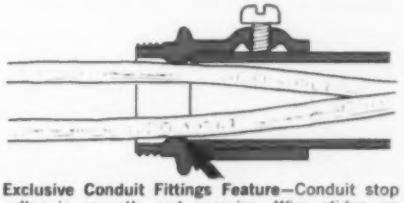
Check the features of this new line of connectors and couplings from Conduit Fittings. You'll agree this fitting gives you far more than anything in the field. Yet, it's competitively priced.

- One piece, solid tubular steel
- Embossed Surface Provides superior thread area for set screw
- Jagged burrs on edge of set screw hole are eliminated
- Pre-set screws eliminate lost time on the job
- Case hardened screw assures positive contact—greater hold power
- Chrome-Brite plating fights corrosion
- Rolled threads simplify fastening, save time
- Deep threading on neck of connector insures maximum security in box
- Heavy duty locknut
- 1¼", 1½", 2" connectors have two set screws; couplings have four set screws.

WRITE OR CALL FOR DETAILS



Conventional fittings leave sharp, cut edge of conduit exposed so that insulation can catch and strip. Pull through is difficult. Shorting possible.



Exclusive Conduit Fittings Feature—Conduit stop collar is smooth and oversize. Wire glides on rounded edge of collar. Wire is protected, pull-through easy.

USI Conduit Fittings DIVISION OF U.S. INDUSTRIES, INC.

6400 W. 66th Street • Chicago 38, Illinois
Telephone: PO 7-8900

Design-matched lighting components all from one source cut call-backs

Revere offers widest line of outdoor lighting

No matter what the outdoor lighting job, Revere has the equipment for it. Revere offers a wide range of incandescent, mercury and fluorescent lighting fixtures, cluster lights, hinged and rigid poles, transformers, and accessories. The complete Revere catalog is all you need to be in the profitable outdoor lighting business.

Matched units for trouble-free installation

You can cut contractor call-backs by ordering *all* components for an outdoor lighting job from Revere's matched line. This assures you that the equipment will fit right for proper installation. It means *one* delivery from *one* manufacturer — no wasted time co-ordinating and expediting deliveries from several suppliers.

Lighting layout service helps you sell

Revere's qualified engineering staff is always ready to give you professional outdoor lighting layouts — *fast* and at no charge. Into each Revere layout goes 30 years of concentrated outdoor lighting experience — you're sure the lighting is engineered for peak efficiency. Send us specifications for your next outdoor lighting job.

Simplified ordering, pricing, billing

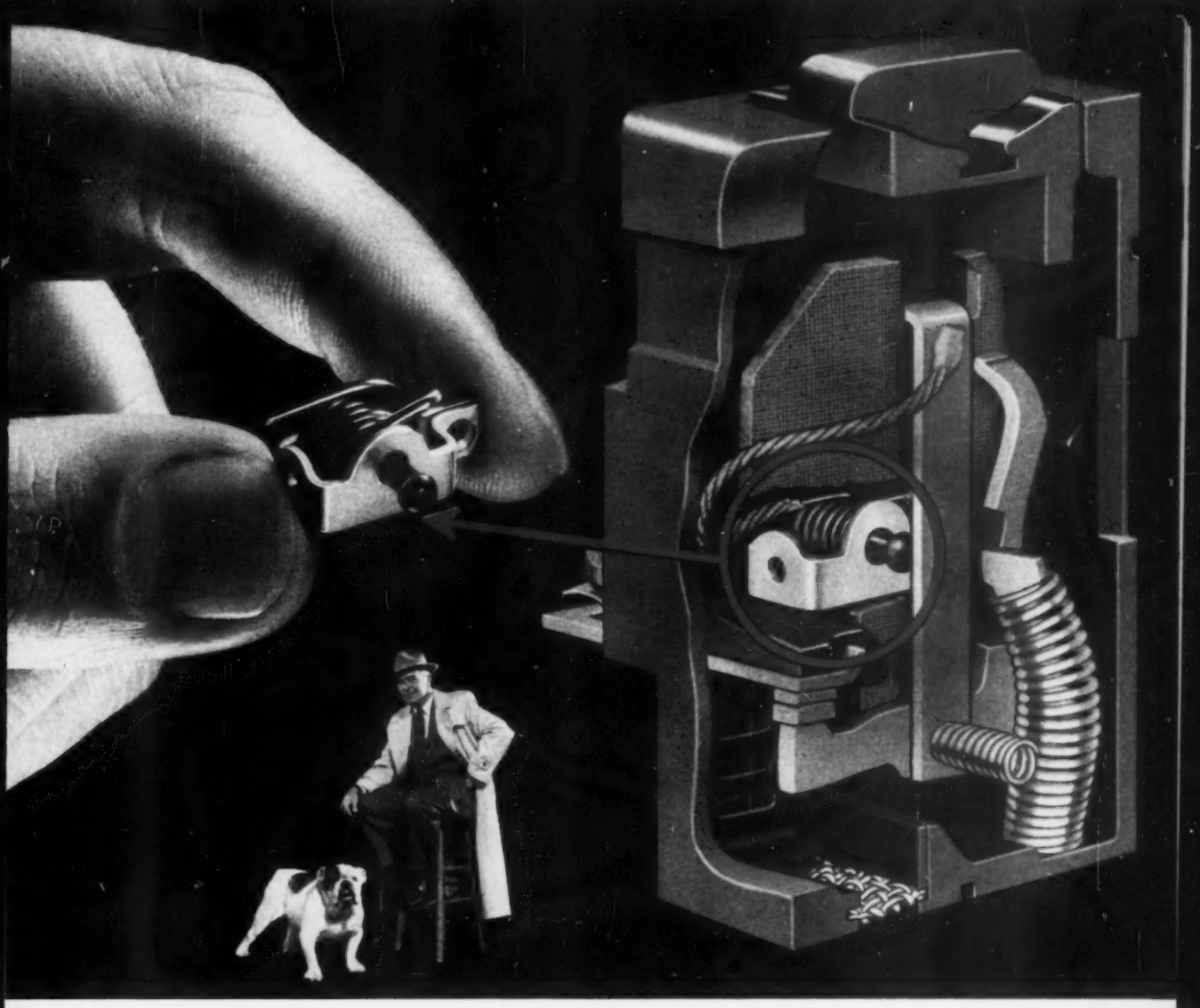
You can save time and money by ordering all your outdoor lighting equipment from one reliable source. With Revere, you can select *all* components from *one* catalog, place *one* order, have *one* price source, receive *one* invoice. Sales costs and clerical detail are kept to a minimum, and your overhead is reduced accordingly.

Write for Revere Outdoor Lighting Catalog

Revere ELECTRIC MFG. CO.

OUTDOOR LIGHTING

Revere Electric Mfg. Co. • 7420 Lehigh Avenue • Chicago 48, Illinois (In suburban Niles)
Long Distance Phone: NIles 7-6060 • Chicago Phone: SPring 4-1200 • Telegrams: WUX Niles
In Canada: Curtis Lighting, Ltd., Leaside, Toronto, Ontario



NO TROUBLE CALLS WITH PUSHMATIC

coil protection is standard in every breaker

Protect branch circuits against high overloads and "flash-shorts" with Pushmatic® magnetic coil action! BullDog, the first to offer this protection in 15-amp and 20-amp ratings seven years ago, builds this safeguard *into every Pushmatic breaker*. The solenoid (coil) —coupled with the thermal element— provides *double* circuit safety. Makes trouble calls a thing of the past.

As you can see in the above picture the Pushmatic uses a *multi-turn coil*. High overloads or "flash-shorts" instantly set up a magnetic field in the coil—causing the metal plunger to trip the latch and break the circuit. BullDog Pushmatics provide not only maximum branch circuit protection, but protect lamp and appliance cords, too!

Small overloads are taken care of by the thermal-bimetal latch. An overloaded circuit will heat the bimetal which curves, releasing the latch. A built-in time delay prevents nuisance tripping in case of harmless overloads.

Push sales—promote safety with Pushmatic coil action! Each and every Pushmatic is rigidly tested to assure precision operation. Multi-turn coils are standard in all Pushmatics—15 amperes through 50 amperes. Customers will find Pushmatic double protection pays off, too!

BULLDOG ELECTRIC PRODUCTS DIVISION
I-T-E CIRCUIT BREAKER COMPANY
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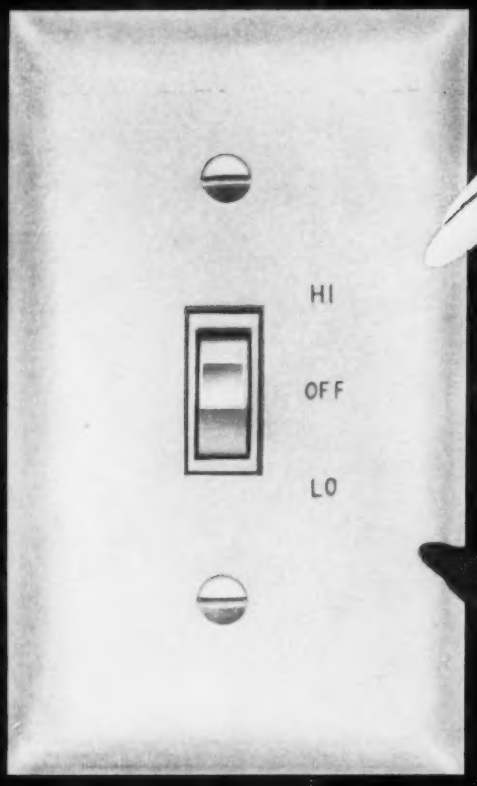
Slater

Light Control DIMSWITCH



30% LIGHT!

- A MUST FOR CHILDREN'S ROOMS . . .
- GLAMORIZES ANY ROOM
- PAYS FOR ITSELF IN ELECTRICITY SAVED
- INCREASES LAMP LIFE 20 TIMES
- DIRECTLY REPLACES ANY EXISTING SWITCH FOR INCANDESCENT LAMPS
- OFF IN CENTER . . . ELIMINATES CYCLING THROUGH BRIGHT. AVOIDS EYE SHOCK!

Fits any standard switch box! — No additional wiring required!

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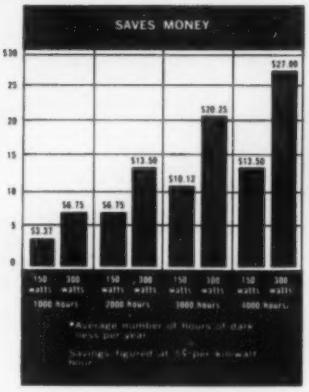
UL LISTING APPLIED FOR

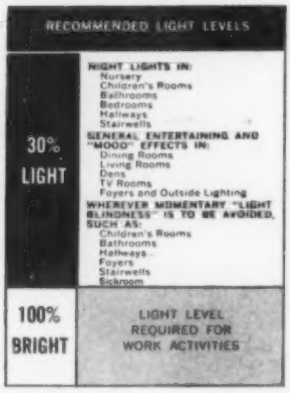
FOR INCANDESCENT LAMPS ONLY

Slater HI-LO DIMSWITCH

the FIRST dimmer switch using electronic circuit . . .

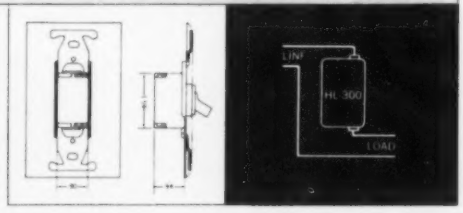
- remove old switch, put in HI-LO
- engraved positions HI — OFF — LO show where you're "at"—right on the plate!
- OFF in center — eliminates cycling thru bright. Avoids eye shock
- no rheostats — no transformers
- uses current proportionate to light
- increases lamp-life over 20 times on LO
- single pole, 3-way, 4-way
- available regular or interchangeable QST fits 2" thinwalls, back-to-back





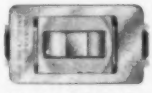
		Pkg.	Ctn.	Wt.
single pole — standard mounting	**HL Series** — with Sta-Kleen wall plate	10	50	15
	HLS Series — with Satin Finish stainless steel wall plate	10	50	17

HL-200 — 200 watts
HLS-200 — 200 watts
HL-300 — 300 watts
HLS-300 — 300 watts
HL-500 — 500 watts
HLS-500 — 500 watts



single pole — interchangeable	**HLQ-300** — Plate not included	10	50	8

HLQ-300 — 300 watts
HLQ-500 — 500 watts



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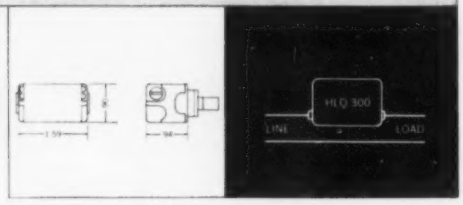
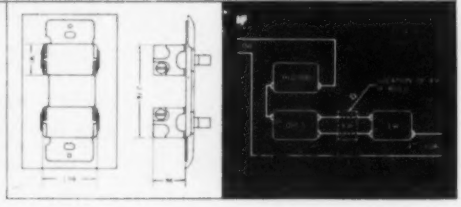


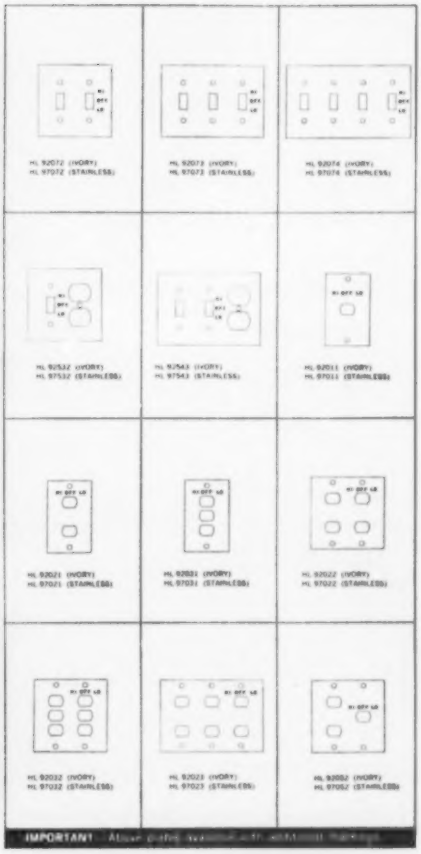
3-way* unit	**HLQ-3 Series** — with Sta-Kleen wall plate	10	50	20
	HLQS-3 Series — with Satin Finish stainless steel wall plate	10	50	23

HLQ-3-300 — 300 watts
HLQS-3-300 — 300 watts
HLQ-3-500 — 500 watts
HLQS-3-500 — 500 watts

two may be installed in one gang switch box

*This unit can be combined in a circuit with standard three or four way switches





IMPORTANT — Allow extra space for each additional flange

Slater HI-LO DIMSWITCHES

with this complete line of new wall plates

STA-KLEEN No grooves or ridges to catch dirt. Will not discolor.
Tough, hard, durable fireproof Bakelite. Perfect for institutional, residential and industrial use!
New parabolic design.

HL-92071 STA-KLEEN IVORY

HL-97071 SATIN FINISH STAINLESS STEEL

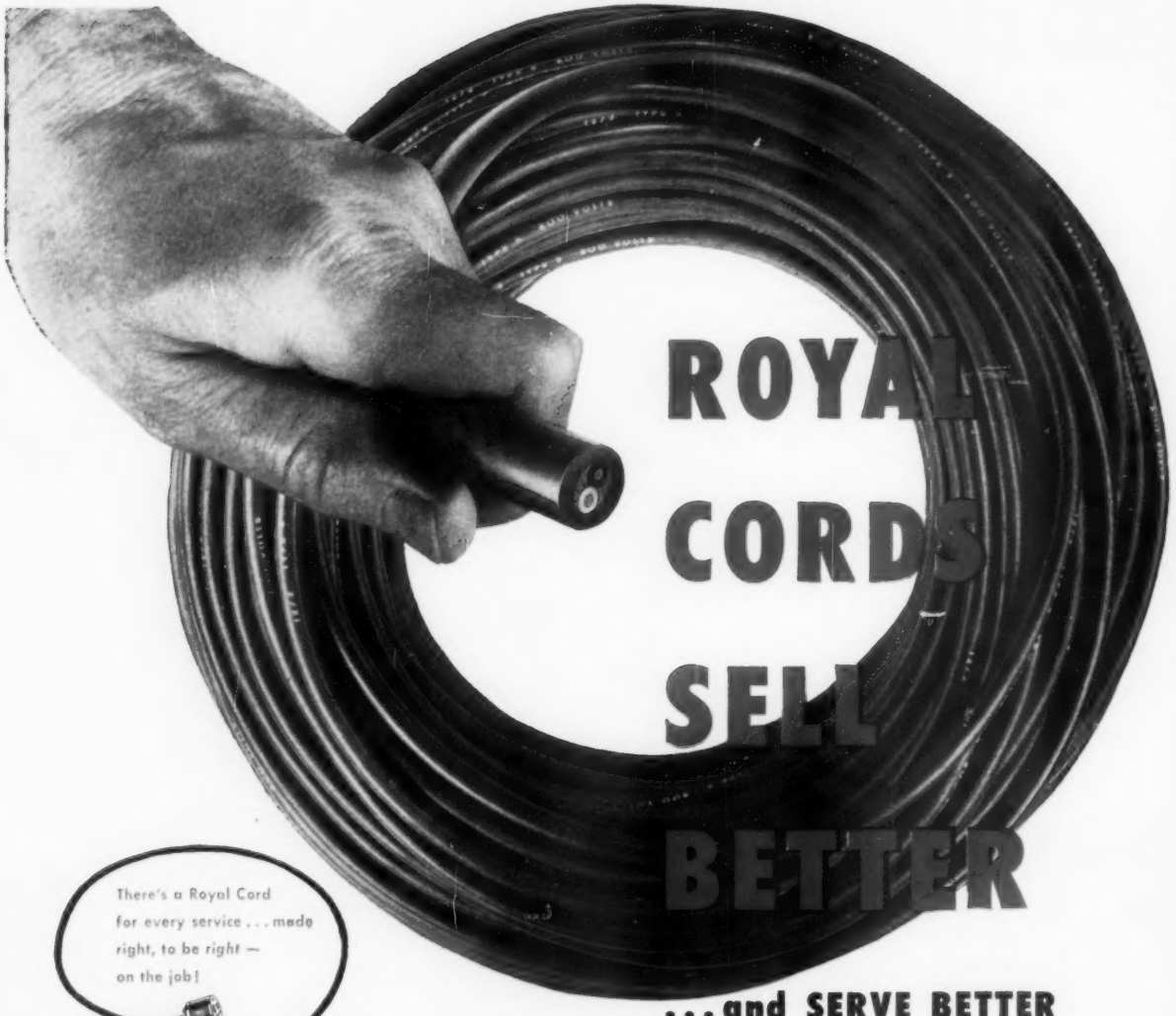
Designed by one of the foremost industrial engineers for use in homes, hotels, schools, hospitals, institutions and offices where beauty and "stay clean" advantages are paramount.

SATIN FINISHED STAINLESS STEEL ALSO AVAILABLE

Slater ELECTRONICS CORPORATION, GLEN COVE, NEW YORK

PATENTS PENDING

UL LISTING APPLIED FOR



ROYAL CORDS SELL BETTER

There's a Royal Cord for every service . . . made *right*, to be *right* — on the job!

. . . and SERVE BETTER

AWG Size	Number of Conductors	STOCK SIZES								
		SV	SJ	SJO	S	SO	SO-60%	W	SJT	ST
18	2, 3, 4	18/2	x	x	x	x	x		x	x
16	2, 3, 4		x	x	x	x	x		x	x
14	2, 3, 4		x†	x†	x	x	x*			x
12	2, 3, 4				x	x	x*			x
10	2, 3, 4				x	x	x*			x
8	2, 3, 4				x	x		x*		
6	2, 3, 4				x	x		x*		
4	2, 3, 4				x			x*		
2	2, 3							x*		

† Stationary service only.
* with P-122-BM permanent indent marking.

EXTENSIONS | CAPS AND CONNECTORS | FUSES | WIRE AND CABLE | WIRING DEVICES

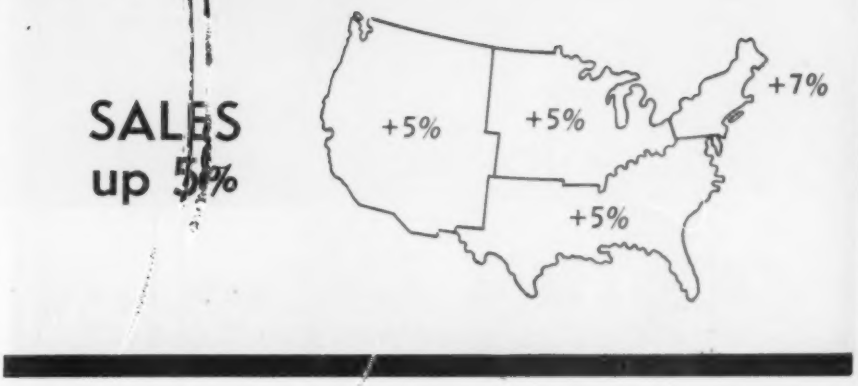
Electrical contractors and maintenance men prefer Royal Portable Cords, have given them greater acceptance than any others. That means more sales, faster turn-over, for you.

Royal offers the most complete range of types and sizes, too; one source for *all* your portable cord needs. From any angle, Royal Cords are best for you. For complete details, see your nearby Royal representative.

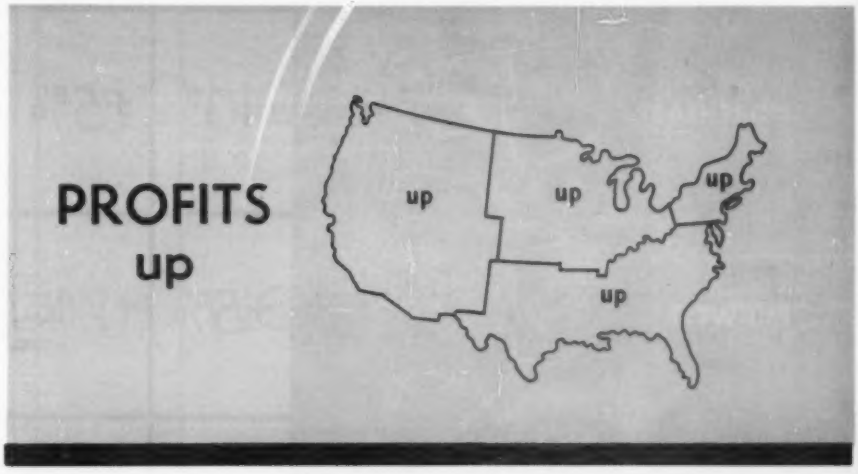
ROYAL ELECTRIC CORPORATION
PAWTUCKET, RHODE ISLAND

ROYAL ELECTRIC
. . . an associate of

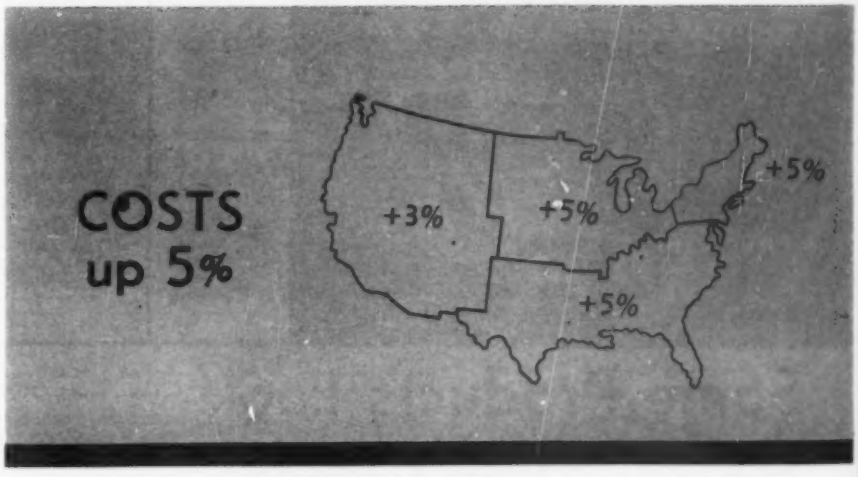
NATIONALLY, the median electrical distributor's forecast for his firm is a 5% increase in over-all dollar sales. The expectations range from a 20% gain to a 10% drop. Of the 127 wholesalers who responded, 104 look for an increase in dollar sales, 13 anticipate no change from their 1959 levels, and 10 expect a decline. The percentage gains anticipated by the two largest groups of respondents are: up 10%—with 43 forecasting it, up 5%—with 37 forecasting it.



"HOW do you think your net profits in 1960 will compare with 1959?" was a survey question answered by 123 distributors: 86 say up, 19 say down, 18 say no change. Nationally, the ratio was more than 2-to-1 that net profits would rise. Relatively, the Midwest is the most optimistic region: 32 say up, 4 say down, and 8 say no change. Least buoyant is the Northeast, where 16 say up, 7 say down, and 7 say no change.



UP 5%—that's the median distributor's expectation regarding the direction and degree of change in his operating costs. This is the median nationally and also for three of the four regions. Of the 122 distributors who replied, 98 expect their operating costs to rise, 16 anticipate no change from 1959, and 8 look for a decline. On the up side, 2 expect as much as a 20% increase, while 10 anticipate a 10% jump in their operating costs.



How Distributors Forecast 1960:

Everything Is Still Looking Up

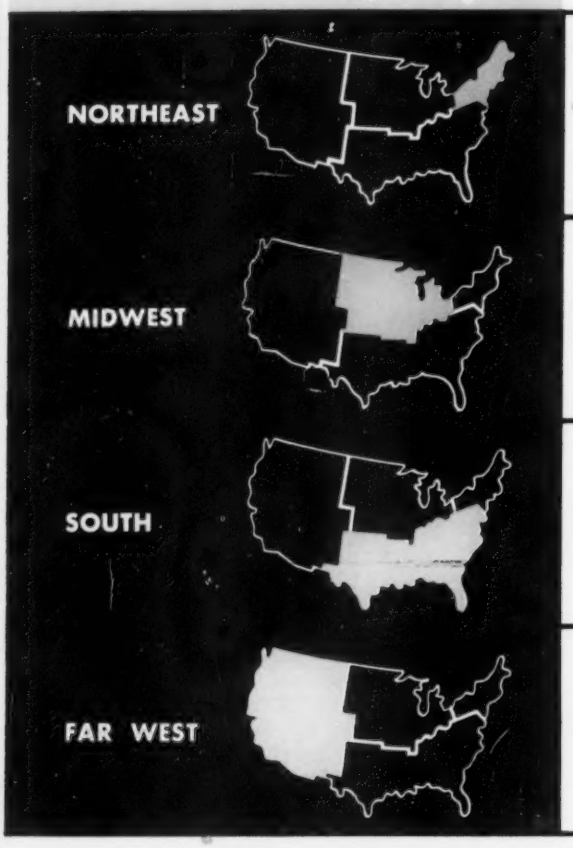
OPTIMISM is a bit tempered as electrical distributors enter 1960. It's there, to be sure, but it lacks last year's bounce. One reason for the relative reserve may be the possibility of continued labor unrest in the steel and copper industries.

This highlights how ELECTRICAL WHOLESALING's distributor panel forecasts the outlook in three key areas: sales, profits and operating costs *(pictured in detail above)*.

Fifteen more pages in EW's Annual Outlook and Review follow

OUTLOOK FOR SALES

	Residential Lighting Fixtures	Commercial and Industrial Lighting Fixtures	Motors	Motor Controls	Fans and Ventilating Equipment
NATION	+5%	+5%	NC	+5%	NC
NORTHEAST	+10%	+5%	NC	+5%	NC
MIDWEST	+5%	+7%	+3%	+7%	+3%
SOUTH	NC	+5%	NC	+5%	NC
FAR WEST	+5%	+5%	NC	+5%	NC



Some Products Look Hotter Than Others

WHILE plenty of gains are predicted by EW's distributor panel, there's less exuberance in the product-by-product sales outlook for 1960 than there was for 1959. Last year, wholesalers saw sharper spurts in prospect for more product groups. Now, with the rebound from recession lows behind them, distributors look for more moderate gains. Exception: electric heat.

In general, distributors expect dollar sales for seven product groups to rise this year, with volume for seven others to match 1959 levels (*See table for median expectations nationally and regionally. "Hot" product forecasts are indicated in color. Median means "in the middle." Example: 119 wholesalers submitted forecasts for their motor control sales, ranging from up 20% to down 5%. The distributor in the middle—number 60—predicts a gain of 5%, which is the median expectation for the product group nationally.*)

The products most likely to gain this year are: electric heating equipment, wiring supplies, motor controls, commercial and industrial lighting fixtures, panelboards and switchboards, residential lighting fixtures, and transformers. The remainder are seen as holding their own.

Product-by-product, here's how the distributors' forecasts (total respondents: 127) break down:

- **Built-in electric space heating equipment**—87% of the distributors responding predict an increase in their sales, 11% say no change, 2% say down. (One midwestern wholesaler anticipates a 100% rise, another expects a 50% gain.)
- **Wiring supplies**—79% say up, 12% say no change,

Electric Housewares	Power Tools	Signaling Equipment	Built-in Electric Space Heating Equipment	Pole Line Equipment	Transformers	Panelboards and Switchboards	Wiring Supplies	Industrial Electronic Parts
NC	NC	NC	+10%	NC	+4%	+5%	+5%	NC
NC	NC	NC	+10%	NC	+4%	+5%	+5%	NC
NC	NC	NC	+10%	NC	+5%	+6%	+7%	NC
NC	NC	+5%	+10%	NC	NC	+5%	+5%	NC
NC	NC	+5%	+10%	+5%	+5%	+6%	+5%	+5%

9% say down.

• **Motor controls**—78% say up, 20% say no change, 2% say down. (One southern distributor qualifies his forecast of a 10% increase with this comment: "May not because too many suppliers are making OEM's of those who are not OEM's.")

• **Commercial and industrial lighting fixtures**—76% say up, 17% say no change, 7% say down.

• **Panelboards and switchboards**—72% say up, 19% say no change, 9% say down. (A western distributor who forecasts a 20% gain adds: "We accent this type of apparatus. Our principal supplier was non-competitive price-wise part of this year. Business was down, is now picking up.")

• **Residential lighting fixtures**—60% say up, 30% say no change, 10% say down.

• **Transformers**—56% say up, 40% say no change, 4% say down.

• **Signaling equipment**—48% say up, 46% say no change, 6% say down. (A southern distributor explains his prediction of a 10% decline this way: "On account of an exceptionally good year during 1959.")

• **Motors**—43% say up, 56% say no change, 1% say down.

• **Industrial electronic parts and apparatus**—36% say up, 63% say no change, 1% say down. (Ten distributors predict a 20% increase in sales of this product group. Four of them are in the Northeast.)

• **Pole line equipment**—35% say up, 62% say no change, 3% say down.

• **Power tools**—35% say up, 59% say no change, 6% said down.

• **Electric housewares**—34% say up, 48% say down, 18% say no change. (In passing up making a forecast for this group, a northeastern distributor notes: "discontinued—gross profit margin too small.)

• **Fans and ventilating equipment**—34% say up, 40% say no change, 26% say down.

What Distributors Are Saying

IN THE NORTHEAST

Six Salient Points

Sales—We will continue to strive to expand our coverage in this area by attracting better accounts rather than chasing sheer volume.

Gross Margins—In view of our "top service" mode of operation, we feel that we will be able to maintain our good gross margin percentage.

Net Profits—Should be as good or slightly better than 1959.

Manufacturers' Policies—We believe that more and more manufacturers will be forced to adopt a firm distribution policy instead of trying to play both sides of the street.

Competition—We never fear price competition. Our service will continue to be the hottest "price" we've got!

Problems—(1) How to educate the average contractor to the benefits of doing business with us. (2) How to effectively promote electric heat, which incidentally may become the hottest item of 1960.

Simple Fact

Electrical wholesaling simply not profitable.

Prospect: Narrower Nets

Heavy work on architects' drawing boards. Federal redevelopment in this territory should increase sales and margins in 1960. Manufacturers' tendency to lower price margins, increased freight rates, keen competition, etc., will probably narrow net profits.

Two-way Squeeze

1. Steel shortages will postpone some larger jobs, leaving 1960 short of usual activity.

2. Social Security, taxes and others will increase overhead without more output to cover.

Less Leading (by the nose)

We are hoping (and hope springs eternal) that the industry as a whole might get smarter and stop being led around by its nose. The potential for profit is there, so it will be up to the individual to go out and get his just and due profit. We look for lessened competition due to the high cost of money.

Plea for Prepaid Freight

We need in both supply business and electric housewares field a little serious thought given to "freight charges." Many distributors today are having to prepay shipments that never were necessary before. Margins have gone down, but expenses have increased. I firmly believe all merchandise sold to distributors should be prepaid and gross margins should be adequate to allow for increased cost of doing business.

"Real Rough Year"

Price is the problem now. Gross margins are very low. Most manufacturers' policies need reviewing. 1960 to me looks like a real rough year.

Lingering Hope

Would like to see uniform 2% cash discount.

IN THE MIDWEST

Seeking Selectivity

We are looking for new lines which offer limited distribution so the profit picture is in line with the cost of our operation.

Higher Profit Products

Our aim is to maintain about same volume with higher net profits. I believe it can be done with items such as electric heat and lighting fixtures.

Solidly-based Bullishness

Bullishness on sales based on construction started in area. **Bullishness** on profit based on our whole organization realization that we have to improve in that category.

Thinking Big

The automobile plants are looking for a big production year, and we think it will be—so our sales could be even considerably more than the 10% we anticipate. The cost of business continues to go up, and we are hoping for an increase in our gross profit margin. In fact, the last few months have indicated this trend, and we hope to see it continue to even a greater degree.

Four Bits of Advice

(1) Do not overlook electric heating—industrial.
(2) Be more selective in lines handled.
(3) Watch credit policy.
(4) Note the industrial contractor is your key to volume and profit.

Practical Promotion

Promote the idea that without profit the future of your business is in trouble!

Optimistic Feedback

The consensus of the opinions of our customers is that 1960 will be considerably improved over 1959. I find this feeling exists with dealers, contractors, and our industrial accounts as well. Our own organization has absorbed the feeling and is thinking accordingly.

Costs Plus Competition

Increased services to get same or more business will cause more cost—so any margin gain (expected) may not hold.

Also price-cutting competition will still be around.

Cash Discount—Still on Agenda

Would be gratified if further progress were made by manufacturers in standardizing cash discounts at 2% 10th prox.

A "Must"

I feel that net profits and gross margins must be raised for the distributor to continue as a full-functioning organization. . . . I believe that manufacturers' policies must be firmed up and that manufacturers should take a good look at their outlets with reference to a greater responsibility as to selective distribution.

About 1960

Here's a quote-by-quote sampling of what distributors from coast to coast told EW:

IN THE SOUTH

Stressing Selectivity

We are moving toward selective selling. We are stocking more and selling harder with manufacturers having a controlled or limited number of distributors. We won't stock or sell for a manufacturer who quotes or allows his agents to quote direct to our customers; they have no knowledge of our operating costs.

Should have record sales in 1960 if manufacturers don't have serious strikes. Gross margins should improve slightly, operating cost will also increase slightly, net profits are expected to be slightly better if no serious strikes.

Competition will still be rough. However, we expect improvement on gross profits from those operating at a loss or on net percentages far too low to justify their capital investment.

A Couple of Points

Sincerely hope that with sales up, competition will ease up on gross margin. Two or three points in the local gross profit rate would make a lot of net difference.

Ups and Downs

Our gross sales will be up. Our gross profit will be slightly lower. Our operating cost will be up. Our net profit percentage will be down.

Cash Discount Call

Bringing the cash discounts terms from net, ½ of 1% and 1% up to 2%—15th prox. would be helpful to our entire industry in my belief.

Salesmen on Spot

I believe with higher taxes in sight, distributors will seek greater profits. In reaching a higher profit range, distributor salesmen will and must do better selling jobs.

Slow-paying and Price-cutting

In our area, it is hard to hold gross margins up. In order to keep sales up, manufacturers will not drop customers who are slow to pay. The slow-pay customer has to sell to keep going and consequently specializes in price-cutting.

Believable

I believe 1960 will be a good year for the distributors who keep a close surveillance over their inventory turns, their overheads and their collections.

I believe 1960 will be a higher-volume year than 1959 but perhaps at a slightly smaller profit rate.

I think 1960 will be a year when more manufacturers will take a closer look at their distribution and will of necessity become more selective.

How Tight?

A lot depends on availability of mortgage money.

Wire Wrangle

In my opinion, the wire manufacturers should take steps immediately to straighten out the deplorable pricing condition. Issue a realistic price and stick to it.

IN THE FAR WEST

Powerful Points (and EW gets a job)

Many of our commercial problems are rooted in the seemingly general practice of manufacturers and/or their representatives calling on our customers—talking prices (and sometimes distributor costs) and in general interfering with the *commercial* aspect of our business. I know distributors here encourage this by not doing a proper coverage job. However, the great danger is that while manufacturers *do not want* to sell directly, they are pre-empting the sales field to the point where it is only one more step to take the order and bill the customer. In my opinion, any manufacturer who thinks clearly about this problem will go publicly on record (advertisements) that their customer calls will be restricted to product acceptance and *will not* include price discussions.

Also, it appears that in some areas there is too free an exchange of product lines between distributors. This is a result of the buyer's insistence in "one-stop service." If we are a Westinghouse distributor, why should we also be able to buy and resell G.E. apparatus at even a courtesy 5%? Actually, what is happening is that the houses having the premium lines—who have fought and struggled through the years to establish these lines in their areas—are now making them available to any little neighborhood chiseler who from time to time comes into being and enters the competitive market. Why shouldn't established distributors restrict their sale of these premium lines to others of their own standing? Is there any law against it? (This would make a *very, very, very* interesting research job for your magazine and would make some very interesting reading for a lot of people.) **Editor's note**—*It sounds so interesting, we'll do it.*

Manufacturers, Take Note

We do not expect too much variation in sales trends as we are in a fairly stable market. We are getting very concerned about the seeming lack of interest in orders after they are placed with manufacturers.

Our customers cannot plan installations if our suppliers do not give us replies to our acknowledgments and follow-up requests. After all, profits are not made until merchandise is delivered and paid for.

So far as competition is concerned, we have a feeling that more and more businessmen are pricing their goods and services on their own costs and profit margins instead of merely meeting prices quoted by customers. . . .

Fruits of a Change

We have converted our marketing program into one of serving customer need and have avoided all bidding, quoting and participation in "job" sales. We have expanded our inventory and added inside personnel, but not outside sales people.

All was done to weed out marginal credit risks or contacts with accounts receiving "trade discounts."

We publish price specials on items having long discounts in keeping with local trade values of such items, but always with a minimum price still above our prime cost.

By such procedures we have enjoyed our most successful year with profits and sales meeting our most optimistic predictions. We are continuing our policies for 1960 and are quite hopeful of the future. . . .

OUTLOOK:

INDUSTRIAL MARKET

Starting a Fast Rise to

Despite—and perhaps, because of—the steel strike, the nation's industry is entering a new boom period of capital spending for production, construction and modernization. Forecast: more electrical work and more sales.

AS THE NEW YEAR—and the new decade—begin, American industry appears ready to enter a new boom period. The major questions: how big, how soon, and how long will it last?

With steel production on the upgrade and the strike question fading, companies in every major manufacturing industry are looking forward to extremely high rates of production and sales. Part of the acceleration is due, of course, to the steel strike-caused production deferments of the last half of 1959.

What will your share of this rising dollar volume be?

Industrial electrical work—for new construction and modernization—should total $507 million in 1960, representing a healthy gain over the $388 million spent during 1959.

Outlays by industry on new manufacturing plants in 1960 are expected to total $12 billion—a gain of 19%. What's more, investment in new plants and equipment will continue on into 1961 at almost the same rate. Industrial construction should gain about 33% in 1960 over 1959 and continue on with slight reduction in 1961.

- **Steel Still the Key**—As steel went, so went the nation's business as 1959 came to an economically brightening close. While the industry was making a remarkably fast comeback in mid-December, shipments of finished products were just beginning to nibble away at the demand of many customers who were getting their steel wherever they could.

The steel industry now plans to make up for lost time in 1960 by raising expenditures sharply to the tune of 76%—for a total of $1.7 billion. This is only $174 million below the record amount spent by the industry in 1957—a boom year by any measure. The major part of this spending will be for modernization of existing facilities. Underwriting the big investment will be an upsurge in sales of steel—now estimated at 9% higher than in 1959.

- **Auto Production Lagging**—Suffering most dramatically from the 116-day steel strike, the automobile industry was just regaining its feet as the new year began.

More than a month after the steel mills reopened, auto production had hit a low of 46,007 cars—down 68,476 from the previous week and 123,128 below production for the second week of December in 1958. On December 6th, 30 of the industry's 49 assembly plants were shut down. But by January 3, many had been reactivated.

At year end, fourth quarter auto production was off 750,000 cars from the original manufacturing goal. That the automobile marketing pattern will be affected is certain. Most of the steel available during the strike was used on the new small cars. Whether or not auto manufacturers are banking on record sales stimulated by the "compacts", they plan capital expenditures 30% higher in 1960 than in 1959.

You can help customers modernize electrically and profit by it!

Much of this spending will be for electrical modernization and automation as the auto producers continue to search for cost-cutting, profit bearing ideas. And keep this in mind: auto manufacturing and assembling is not restricted to the city of Detroit or the state of Michigan. It's a nation-wide industry, with fabricating and finishing plants in every state—not to mention the thousands of indirect, dependent sub-contracting operations.

A New Boom

For creative salesmen—a banner selling year . . .

• **Electrical Manufacturing to Climb**—Manufacturers of electrical apparatus—both heavy and light—are planning to invest 22% more in 1960 than they did in 1959.

To all appearances, electrical manufacturers are looking ahead not just to 1960 but way beyond—as far as the '80s. They're giving high priority to the complete electric home—it's true—but their promotional planning is all inclusive. A new marketing concept colors their thinking when it comes to industrials—complete production automation.

Electrical automation for manufacturing processes is no longer the wispy proposition it once was. It's practical, it's real. But there's one hitch. It takes trained personnel—manufacturing and distributing—to discuss electronic and electro-mechanical automation principles and practices intelligently—and profitably.

How knowledgeable are you on electronic and electrical control questions?

One important point to keep in mind on electronics is the fact that the electronic substitute for the traditional electrical product is on the market because it can do the job better—and eventually may replace the traditional electrical product. Right now seems the best time to investigate industrial electronics and do some planning ahead.

• **Higher and Higher**—The steady and continuing trend to industrial use of higher voltages will be more widely evident in 1960 as manufacturers seek greater efficiency and economy in production.

This changeover necessitates extensive electrical apparatus and supplies purchases both for new plant construction and for modernization of existing facilities—many of them just a few years old, yet already outdated.

In the turn to voltages higher than 600 volts, there's almost no end to applications you can sell—not to mention all the needed extras. You can sell-up on high voltage cable, primary voltage transformers, stepdown transformer units, control and protection devices (such as load interrupter switchgear, power circuit breakers, oil-filled cutouts) and high voltage terminal devices.

• **Shedding More Light**—With 100 to 200-ftc becoming the norm for industrial lighting installations, 1960 should afford outstanding opportunities for the electrical distributors' salesmen looking for new lighting and relighting sales. Industrial lighting dollar volume in 1959 was $52.4 million and in 1960 it will rise 2%.

Why not help shed light on these new lighting levels for your manufacturing customers?

High frequency lighting should come into its own in 1960 as plants try to catch up on new higher lighting levels. Motors for modernization are also a good bet. Motor control equipment should have a big year in automation applications as well as customary manual usage. Plug-in and feeder-type busway will be big items to industrial customers with flexibility and low-impedance performance in mind. Aluminum conduit will continue to take great sales strides in 1960, as will mineral-insulated, interlocked armor, and direct burial cables in plant installations.

• **Outlook Excellent**—For the electrical distributor and his salesmen who serve the industrial market, 1960 should be a top sales year. Due to shortages of steel-using products, the first three months may be slow for you, but after that it will be the kind of a year that will call for your best efforts, yet hold the greatest promise and the fullest rewards for salesmen ready to sell creatively for a bigger share of business.

It's a blue-chip game. How will you play it?

OUTLOOK:

RESIDENTIAL MARKET

Small Decline Seen in

Private and public residential construction is due to decrease—but not drastically—this year as money becomes tighter. Electrical work, however, will increase as the consumer becomes more electrically minded.

ALTHOUGH PRIVATE housing starts will decline this year from the 1959 figure of approximately 1.35 million, electrical work will show a rise. Housing cuts, however, will not be drastic, and the picture could look brighter if there is an ease in the present scarcity of mortgage money.

Starts in private construction for 1960 should reach a total of about 1.2 million. This would be an 11% decline from the 1959 figure.

Total private construction in 1959 gained 8% over the total dollar volume of $33.9 billion spent in 1958. Of the $36.7 billion which was spent last year, $20.7 billion went for residential construction. This showed an increase of 16% over the 1958 figure.

• **A Good Year**—Last September marked the conclusion of a record-breaking 12-month period. Total starts for dwelling units exceeded those of any similar period in history. Although private starts declined 6% from the August figure, the September level was still the highest on record for the month.

The decline in starts forecast for this year will be caused by two factors affecting the building picture. First, mortgage money will be scarce. Because of this, builders may have to reduce their housing starts in the first half of this year. Starts may be reduced further if the sales decline that started last May continues into the first six months of 1960.

This can mean more electrical sales if the consumer wants more for his money.

The tight money situation has brought about a higher cost in purchasing a home. Interest rates and discounts on mortgages are higher; applicants for mortgages are being more carefully screened; salary and credit requirements have risen.

Secondly, many builders predict that they still will feel the effects of the steel strike well into the spring. Because of this situation, they are planning few—if any—housing starts.

• **A Continued Interest**—This, however, has not altered the decision of the consumer to take on a mortgage. At present, about 6 out of 10 American non-farm families own their own homes. And the average amount of each mortgage is higher than that incurred 10 years ago.

For total private electrical work, approximately $2.75 billion was spent in 1959. Of this, almost $830 million was spent for residential uses. This topped the figure for $754 million spent in 1958. This year, although housing will get off to some slow starts, electrical expenditures will be increased to about $896.4 million. This will be due largely to a greater demand for better electrically-equipped homes: more service for more air conditioning, more electric heating and better lighting.

As the consumer becomes more conscious electrically, your sales opportunities rise.

Most homes now are being constructed with 100-amp service. Future goals are for 200-amps. Last year saw a jump in public residential construction. Of all total public construction—$16.8 billion—$1.2 billion went for residential purposes. This represents an increase of 44% over the 1958 figure. The 33,000 public starts last year represented about $31 million in electrical work. This year, starts probably will remain fairly stationary. However, the electrical share of the dollar probably will increase to about $33.5 million.

• **Steady Growth**—Over the past 10 years, residential use of electric power has been climbing steadily. Of the total sales by utilities last year,

Housing Starts

Fewer houses . . . but more electrical work.

28.5% was utilized in residential use. Again this year, there will be an increase to 28.6%. As a comparison, the average use of electricity in the home has increased while the average yearly cost per customer has risen only about half as fast. This is due largely to the decline of the average annual cost per kwhr.

One of the distributor's potential markets is in electrical modernization. For 1960 almost $250 million can be spent on residential lighting alone. Wiring and installation in residences can amount to about $675 million. But cultivating this '60 potential is up to you.

Home lighting can be your key in the modernization market.

This modernization work can come in the form of many projects as the homeowner tends to live better electrically. Expenditures for residential lighting—both in the modernization and new construction market—have been rising, and will continue to rise in 1960. Last year showed that of the $350,723,000 spent for general lighting in the private construction field, $82,816,000 went for residential purposes. This represented the largest single amount spent in the private construction area.

For public construction $3.6 million was spent for residential building. This shows about 2.4% of the total dollar spent for residential in the public construction field. In the modernization market, $75 million was spent last year in the combined private and public fields for relighting. About 11% of this was spent in private residential work.

• **More Emphasis**—Predictions now are that about $95 million will be spent this year for lighting in private and public construction, a good increase of which the distributor should take advantage. New Illuminating Engineering Society recommended lighting levels have—and will continue to have—strong influence on residential lighting. While the recommendations for minimum levels on any seeing task are now 100-ftc, levels probably will be raised to 200 by 1970.

Electric heat is here to stay. Your obstacle now is yourself.

One of the rapidly gaining products today is electric heat. Latest figures show there are now 582,250 resistance-heated buildings in the United States. Of these, 579,000 are private homes. By the end of this year, the figure will jump by another 75,000 homes, a number not to be overlooked by the electrical distributor if he wants to control the market.

The future looks bright for residential heating. The trend among utilities throughout the nation is towards a special rate. Many of those who do not have a special rate use the same rate as their lowest residential rate.

• **Aid to Sales**—Industry-wide promotion will continue to play an important part in helping to upgrade sales in the residential market. An increased amount of advertising stressing the need for better home wiring will be launched next month during National Electrical Week (Feb. 7-13). In addition, the National Wiring Bureau is preparing several sales aids for the HOUSEPOWER program designed to assist the industry in promotion.

The Edison Electric Institute has planned a $3 million advertising program for this year in its Live Better Electrically program. Both lighting and heating manufacturers have indicated they will stress consumer advertising more this year.

With the increased amount of cooperation manufacturers are planning to give the electrical distributor, 1960 looks good for you electrically.

OUTLOOK:

COMMERCIAL MARKET

Backlogs Will Spark

Electrical work, sparked by an upsurge in store and restaurant construction, will rise again in 1960. Despite the continued decline in office building construction, the overall commercial market will show some good gains.

GENERALLY, despite the steel strike of last year, commercial construction should show a gain in 1960. Although this gain will not be as great as that shown in 1959—up 25% from 1958—predictions are that construction in this field will rise 11%. The prospect for a rise in electrical work is even better.

This year will show an increase in building expenditures to $2.5 billion, compared with the $2.25 billion of last year. Most of this increase will go into the construction of stores, restaurants and garages, as was the case last year.

• **Sharp Decline**—Partly because of the 1959 steel strike and partly because of tight credit money, office building and warehouse construction was down greatly last year. Figures showed that, compared with the 1958 expenditure in this area, there was a drop of 15%. For office and warehouse outlays, $1.68 billion was spent last year, compared with the $1.99 billion spent in 1958.

For electric work, here is the area for you to hit profitably.

For stores, restaurants and garages, however, the picture was reversed. Figures showed an increase here of 28% over the 1958 figure of $1.57 billion in new construction.

Because of the steel strike and tight credit, work was slowed and even curtailed on many commercial office building and warehouse construction projects. However, this year should see an increase in money spent here. Despite the shortage of steel, there was an increased flow of proposed work in the last few months of 1959. At present, there is a backlog of proposed private commercial construction of approximately $14.5 billion. Much of this proposed work is expected to get underway by the middle of the year.

• **Rising Taxes**—In many areas, the high—and rising—tax rate is forcing many tenants of downtown office buildings to move either to the suburbs or to newer buildings downtown. This is leaving many older buildings empty or near empty, and is a detriment to the planning of newer structures.

In Boston, for instance, the office vacancy rate has reached almost five per cent. This is almost twice the figure of 18 months ago.

Office building and warehouse construction started out in January of last year with expenditures reaching $158 million. From there, they steadily declined until May, when the figure reached $159 million. In August, the peak hit $178 million. For the remainder of the year, construction put in place rose slowly.

Despite the decrease in office building construction last year, the electrical share of the building dollar going into commercial construction held its own, mainly due to the large increase in store, restaurant and garage construction. For the commercial market, almost $650 million was spent last year. Forecasts for this year show that the figure will be even higher. While construction may be down for the first part of the year, electrical work in backlogs shows a healthy increase. Because of this, the figure could reach $700 million this year, which should give you substantial sale increases.

You can't start too early in planning for this backlog.

• **More Markets**—For the distributor, the modernization market will continue to offer good potential. Of the $100 million predicted to be spent

Construction Rise

Bank modernization . . . a healthy look.

for electrical modernization, approximately $70 million will be spent for wiring and installation. For relighting, about $30 million will be spent.

To meet the increased services demanded by the consumer, more and modern automated machines will be installed in these establishments—and at an accelerated rate. This will give the electrical distributor an opportunity to get into or increase his electronics selling.

As a long-range prediction, potentials for electrical modernization are estimated at about $8.75 billion by 1970. Of this, $5.5 billion can be spent for wiring and installation, and $3.25 billion for relighting.

One large potential for the distributor is in the lighting market. Last year, approximately $72,576,000 was spent for lighting equipment in new stores, restaurants and garages. The figure for offices, warehouses and loft buildings was $61,230,000.

Higher levels of lighting are now being used, in addition to an increased amount of light and more atmospheric lighting. All of this leads to more fixtures, more and larger controls and more wiring.

As new lighting techniques are developed, construction costs for lighting equipment will increase. New developments by manufacturers made in recent years are expected to continue. Manufacturers intend to promote lighting more than ever during 1960, and expect to increase their aid to the distributor in selling to the commercial market.

Electronic systems should be investigated for profitable sales.

You can't go wrong profit-wise in these lighting sales.

- **Power Growth**—The installation of air conditioning in commercial buildings has been rising at a fast rate the past two years. This trend will continue in 1960, and will account for an increased use of electric energy.

Last year, the percentage of total electric energy sales to the commercial market amounted to about 17.5%. This year the figure probably will reach 17.6%. Although most of this rise will be due to the increased use of air conditioning, more electric heat installations are playing an important part in commercial construction and modernization.

Not only in new construction but also in modernization of office buildings and retail establishments, new and modern electrical systems are being put to use effectively. This can be profitable for you, especially in the modernization market.

In office buildings, for instance, there is a trend for distribution at 480/277 volts, three-phase, four-wire for power and general area fluorescent lighting. High frequency distribution systems will give high-level, high-efficiency fluorescent lighting. Important items to be sold now include alarms, signals and communication equipment, such as fire alarms, burglar alarms and watchmen's systems.

Larger distribution systems will provide modernization sales.

- **Promotion Increase**—An all-new industry wiring promotion by the National Wiring Bureau will get underway this year. It is called "Keep Pace Electrically", and will feature promotional literature prepared by the Wiring Bureau. National advertising, paid for by NECA, will get underway during National Electrical Week next month. In addition, NEMA's National Lighting Bureau will update technically its Eye-Fi training program. It will make available for industry use individual portions of this program. Until now, only the complete Eye-Fi package could be purchased.

Overall, the commercial market picture is bright for you as the electrical share of the dollar increases in new building and modernization.

OUTLOOK:

INSTITUTIONAL MARKET

Slated for a Slight Rise

Backslide in school spending is due for a slight reversal; big gains in outlays seen for sewerage and water projects; highway spending will dip slightly in 1960, and the modernization market looks bigger than ever.

BARRING the resumption of a steel strike, which has brewed up a steaming cauldron of unsettling effects on institutional building, the institutional market is slated for a 3.25% rise in 1960.

The first few months of '60 will be hectic and perhaps chaotic in the mad scramble for steel. Contractors involved in institutional building will be faced with spotty deliveries, uncertain steel prices and labor costs. As one contractor stated, "It's hard to get anyone to give you a firm bid on a construction job."

Here's the break-down of how things will be for distributors . . .

The over-all breakdown of the next twelve months in institutional building looks this way: Highway construction is headed for its first cutback since '45; public and private school building, down in 1958-59, will start up again—slightly; public and private hospitals, plus religious buildings and utility installations are slated for an increase in physical volume.

Water and sewerage system projects are forecast to get record outlays and a 20% increase is due for college dormitories. Military installations and facilities, which showed an 18% increase over '58, are headed for a stabilization period.

Another factor that might restrain institutional construction in the first half of 1960 is tight money that will pinch and make it hard and costly to borrow.

• **Highways**—As of Sept., 1959, highway construction had exceeded $4.6 billion—a gain of 20% over the comparable period in 1958. But the wave of expenditures on highway construction, resulting from the 1958 Federal Highway Act's addition of $700 million to combat the business slump, is past its peak. The Federal special-aid has expired and this means 1960 will show a dip in highway construction. Road contracts ran about 20% lower in 1959 than in 1958, but awards may show some recovery now that the states know how much money to count on through fiscal 1961. However, the drop in federal highway money is steep; from $2.5 billion in the current fiscal year ending June '60, to $1.8 million for the following year.

By the second half of 1961, highway spending should again be on the upswing. Even if the federal-aid program is stretched out beyond 1972—the original date for completion of the Interstate System—roadbuilding will be a big construction market factor in the 60s. The next decade promises to be *"the era"* for highway construction, as traffic grows to the predicted 90 million trucks and cars on the highways by 1969.

• **Contract Awards**—Recent reports indicated that state highway depts. will let $1,720,000 worth of federal-aid highway and bridge contracts in the first half of 1960. Contractors should sign up $3.1 billion in jobs.

The eight top states with the brightest roadbuilding outlook for 1960 are: California, Florida, Michigan, Missouri, Ohio, Pennsylvania, Tennessee and Virginia. By region, 1960 highway contracts look this way: New England down 10%; Middle Atlantic up 49%; South up 14%; Midwest up 41%; Mississippi to the Rockies down 10%; and Far West up 52%.

Electrical work in new construction is going up and up . . .

• **Electrical Work**—Recent estimates indicate that the potential for electrical modernization in the institutional market is rising every year, and in spite of the drop in some levels of institutional construction, electrical

—Except Highways

Churches: due for rise again this year.

work continues to climb. The total last year was $308 million—9% above 1958. During 1960, electrical work in new construction and modernization is expected to hit $396 million.

• **Modernization**—The 10-year potential for electrical modernization in all institutional markets is estimated to be as follows:

►Relighting—$1.2 billion

►Wiring, installation—$1.7 billion

The share that highways and roads got in the lighting equipment dollar volume picture was $39.8 million dollars in 1959. Outlook: more sales in 1960. This includes streetlighting, viaducts, tunnels, underpasses, bridges, roadway signs and overpasses. The above $39 million figure is $6 million higher than in 1958.

• **Sewer and Water Systems**—In 1959, $1.9 million worth of lighting was done in the sewerage and water systems markets. In addition, this market received an outlay of over a billion construction dollars last year and according to a recent report, it's pegged for another record outlay in '60.

Sewer and water systems follow trends in residential building. During the second half of this decade this market will get a terrific boost from an anticipated housing boom.

• **Schools**—Private construction of schools in 1959 amounted to $393 million, down 6% from 1958. Public construction hit over $2 billion in construction outlays, also down 6% from 1958. In order to meet the need for, and provide room for, a virtual tidal wave of 1960 students, school construction must reverse the backward slide. Restrictions on local finances, tight money, a slow-down in school age population growth have been given as reasons for the drop. But note this: Recent reports indicate that school building will rise slightly this year and there will be a boom in the mid sixties. Right now, there is a big replacement and modernization problem in schools even after 1959, when lighting sales in the school market accounted for over $85 million dollars.

• **Hospitals and Churches**—Private construction on hospitals was down 7% from 1958. Public hospitals saw a 15% rise over '58. Religious construction experienced a 10% rise in 1959 with a total outlay figure of $987 million. Last year's lighting sales in hospitals amounted to $17 million. In religious building, lighting accounted for $12 million in sales. In 1960 there will be an uptrend in both public and private hospitals, and in religious buildings.

• **Military**—Military installations, expenditures up 18% in 1959, have had a tight lid clamped down on them. Construction of these facilities will now be on the down side of the curve. It's merely a return to a normal pace in a federal construction program that is now aimed at combating inflation. In contrast to last year when every effort was made to speed up federal programs and start new ones, the Administration is holding down deferrable spending this year. Lighting market in this area during 1959: $4.8 million.

The real upsurge in this decade will start in the mid- and later sixties, and there is every indication that population growth and technological change will make it the greatest institutional building era of all time—tailor-made to suit the kind of service and products you stock.

Note: over $2 billion in modernization market for the sixties . . .

In the schools: replacement is one of the big problems . . .

Add 'em up and look at total: bright outlook for distributors

OUTLOOK:

DEALER MARKET

A Record Year?

By the end of '60 appliance sales may hit close to all time high; housewares will get an increase of 15% more in manufacturers' shipments; dealers' profits will start to rise; steel shortage will hold things up in early '60

THIS YEAR the appliance industry will reach close to the all-time record sales tally of 1956. Manufacturers' housewares unit shipments will increase 15% over last year's figure of 7,785,576.

Sales: building up to new boom in the 60's. 1959: $8 billion worth.

In 1959 appliance sales and production matched up closely with the peak years of '55-56, and resulted in $1 billion more sales than in '58. The total gain in '59 was close to 15% over the previous year, with electric housewares clipping along at about a 14% increase in manufacturers' shipments. Major appliances showed an 18% increase in this area. Last year's sales totals: $8 billion.

In early 1960, some of the bloom will be taken off the boom due to steel shortages and perhaps tight money. But even so, it won't take long for sales to spurt. By the end of this year, sales should have reached over $8 billion, with a continuing good outlook from then on.

Spending: it'll be at a fast clip. Dealer profits will rise too.

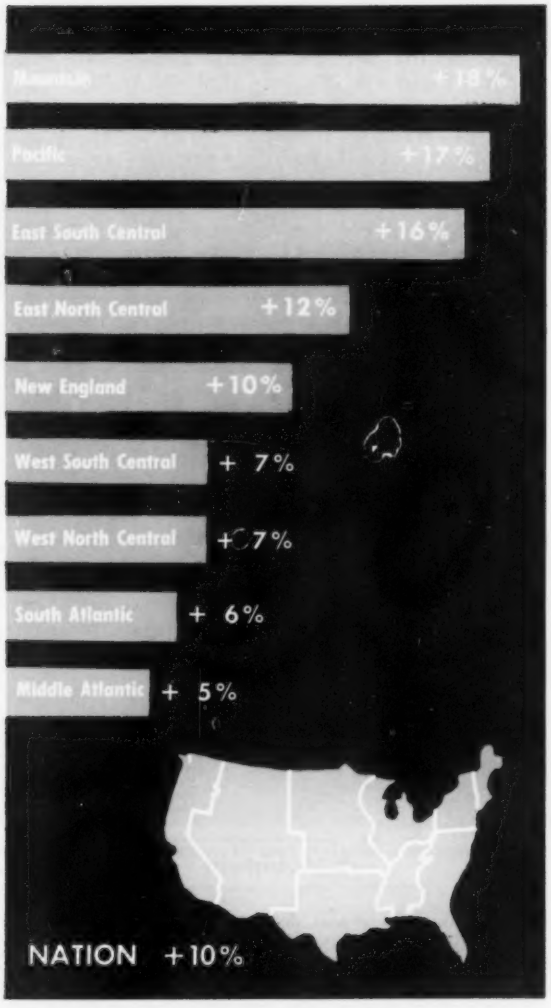
- **Factors**—In 1959, two big factors played important roles in winning over the demand for more housewares and appliances. They were: 1. the gain in family income; 2. the boom in new housing. In 1960 it will be an upsurging market with the hottest spending clip on record. Housing may be due for a slow-down, but consumer willingness to spend, plus higher family incomes will pitch appliance sales to an 8% gain over last year's total volume. This is almost half the rate of gain attained in 1959. In 1960, the median family income (based on '59 dollars) will be $5,250. This is a big plus factor in the outlook for your appliance and housewares business this year.
- **Dealer Profits**—Another factor that means "good year ahead," is the predicted improvement of the dealers' profit margins. Why? Because of bigger volume—and smaller increases in cost. Profits did plunge to a new low in '58. Dealers' profits then registered 1.1% of sales.
- **Crest Riders**—All in all, major appliances will show an increase of manufacturers' unit shipments in almost every category except refrigerators, ranges and washers which will show a slight drop. Radio and TV, dishwashers, freezers, built-in ranges and food disposers will be riding the crest of the appliance sales gains this year. The big gainers in housewares will be electric blankets, toasters, grills and waffle irons, heating pads. The only items slated for a drop: skillets.

Message: Negative approaches don't work. Be a positive thinker!

- **No Pointing**—Four workshop sessions, recently conducted during the NAED Central Region Convention at French Lick, Indiana, reached this premise for electrical distributors to follow in regards to housewares selling: "A positive thinking approach will be the best way to stimulate . . . a profitable partnership for the electrical housewares distributor and manufacturer. The negative approach to the problems . . . finger pointing and blame tagging . . . cannot work." The new era of profitable distribution of housewares can come only through recognition of industry difficulties—and easing them objectively and positively.
- **Promotion**—The National Electrical Manufacturers Association has planned public relations programs in appliances and housewares. These activities will be coordinated with "Live Better Electrically," "Total Electric Home," and other industry promotional efforts in residential fields.

REVIEW FOR REGIONS

How Regions Fared in Sales of Electrical Wholesale Distributors



Based on electrical apparatus, supplies distributors' sales for first 10 months 1959 compared with 1958. Data: Bureau of the Census

Up Everywhere

FOR THE FIRST TIME IN THREE YEARS, and despite a tightening supply of money and a nationwide steel strike which had a crippling effect on every industry in the United States during the second half of 1959, sales of electrical apparatus and supplies distributors climbed nationally—a 10% gain was recorded during the first 10 months of 1959 compared with the same period of 1958.

Total 1959 dollar volume was estimated by the Bureau of the Census at $3.2 billion as against $2.9 billion for the first 10 months of 1958.

West of the Mississippi River, the regions showed substantial gains over 1958's recession ridden figures. The Mountain region, which was the only one to show a gain in the 1958 recession year, again came out on top in '59 with an 18% gain. Close behind it followed the Pacific region with a 17% gain in sales.

In the eastern half of the nation, substantial gains were also recorded with the Middle Atlantic region showing the lowest gain—5%.

• **Strike Warning**—Actual increases in sales were first recorded in February with six regions showing rises. First quarter sales were well above the '58 level, but by the end of the first quarter it was apparent that a slowdown in the rising trend was in the offing due to the ominous cloud of a steel strike threat.

Distributors throughout the country took heed of the warning, and when the storm broke, inventories were in a healthy state. The turbulence occurred at the end of the second quarter when the steel mills shut down at midnight, June 30th.

• **Index Shows Effect**—The effect of the steel strike on business is graphically outlined by ELECTRICAL WHOLESALING's Business Index: January, 140 (1947-49=100); February, 139; March, 148; April, 147; May, 160; June, 170; July, 165; August, 165 — (static due to strike?); September, 185; October, 180.

As the effect of the longest steel strike in the nation's history was being felt by many industries throughout the United States, the electrical wholesale distributing industry, according to a September survey by EW, was feeling no effects whatsoever, since most distributors were well stocked to handle the situation.

At the end of the third quarter, the nation's electrical distributors had not only a steel setback to cope with, but also the fact that 80% of the nation's copper industry was strikebound and the federal government was tightening up money. Nevertheless, sales were still rising, but at a slower pace than predicted.

• **Slight Effect**—As the fourth quarter came around, the nation's industries were clamoring for copper and steel, but no strike settlements were in sight. However, after federal intervention, the steel mills opened on a back-to-work order in November, and the picture brightened.

Overall, the nation's electrical wholesale distributors fared well throughout the 1959 crisis. As the year ended, EW conducted a survey on how the steel strike affected fourth quarter sales. The reply, by those electrical distributors contacted, was generally the same throughout the country—**"very little effect," "no great effect," "slight effect."**

• **Sales High**—Regionally, as the year ended, sales and inventories of electrical wholesale distributors were high.

In the New England region, distributors reported; "no loss in sales," "some slowdown on orders, but nothing to worry about," "strike has had very little effect."

Also in the Northeast, **distributors in the Middle Atlantic region reported:** "sales about average," "sales high, but not expected to exceed '58 level," "some shortages, but strike has had only slight effect on sales."

In the Midwest, distributors had their "ups" and "downs." **In the East North Central region,** sales were reported "down 10%" in some areas, while in the **West North Central region,** sales were "normal," or "very little change," was noted.

In the southern half of the United States, most distributors felt very little effect from the steel setback. **In the South Atlantic region,** electrical wholesale distributors reported, "slight effect," "sales down very little", in the **East South Central** and the **West South Central regions,** distributors had the same replies.

Distributors in the West agreed with the rest of the nation that the sales picture was normal during the fourth quarter, and some distributors indicated that sales were up due to "protective buying."

Thumbnail Regional Review

New England

With the challenge of a decline in industrial activity and the impact of a strike-bound steel industry, distributor sales in the New England region increased by 10% over the same 10 month period in 1958. Economically, the region was running hard on an "economic treadmill." According to latest figures, manufacturing employment was 1.8% below the 1950 level. But, employment in electrical machinery (including electronics) firms rose to 140,000 from just 41,000 in 1947. Latest regional per capita income: $2,354, up 5.9% over 1958. Average gross weekly wage: $76.71. Population gain since 1950: 7.6%.

Middle Atlantic

The Middle Atlantic region, which ran a close second in industrial activity, felt the pressure of the steel strike. Construction which started off well above the '58 level dropped off considerably during the second half of '59. Housing starts also initially above the '58 level, dropped sharply during the second half of the year. But, electrical distributors' sales were 5% above last year's level, for 10 months of 1959 compared to 10 months of 1958. Per capita income reached $2,358, up 3% above '58. Average gross weekly wage: $88.24. The region gained 10.4% in population since 1950.

East North Central

"Take me to your leader"—here it is. For the third straight year the industrial activity leadership crown went to the East North Central region. The steel strike had a strangling effect on the area's automobile manufacturers, but nevertheless, it still came out on top. A big boom in this region resulted from the opening of the St. Lawrence Seaway, which accounted for increased industrial production in the Great Lakes area. For the first 10 months of '59, electrical wholesalers' sales were up 12% (as compared with the same period in '58). Despite the steel setback, automobile production and building construction were above the '58 level for the better part of the year. Latest regional per capita income figure: $2,284. Average gross weekly wage $99.06. The region's population gain since 1950 was 18%.

West North Central

As 1959 ended, business generally was on the rise in the West North Central region. Electrical distributors' sales for the first 10 months of '59 compared with the same period in '58 were up 7%. Both building construction and housing starts were above last year's level. Regional per capita income: $1,655. Average gross weekly wage: $88.25. Population gain since 1950: 8.2%.

South Atlantic

"South Atlantic" may never be the title of a hit Broadway show, but America's third ranking industrial area is rapidly on the rise to smash industrial production records. Textile and furniture production, and housing starts in 1959 were well above 1958's level. For South Atlantic electrical wholesalers, sales in the first 10 months of 1959 were up 6% as compared with the same period in 1958. Latest regional per capita income was $1,808, up 4.5% over last year. Average gross weekly wage: $77.06. Population gain since 1950 was 19.3%.

East South Central

Industrial growth was slow in the East South Central region in 1959 but signs of progress are everywhere. Construction which was in a decline started rising as the year ended. Expanding fast were the chemical and apparel industries, but industrial growth is still slower than most regions. Electric distributors' sales for the first 10 months of 1959 were up by 16% from the same period in 1958. Latest per capita income: $1,256, up 2.5% over last year. Average gross weekly wage: $72.49. Population gain since 1950: 3.5%.

West South Central

"Deep in the heart of Texas" in the West South Central region industrial activity experienced growth during 1959, but at a slower pace than anticipated. Oil and agriculture, the leading industries, were off. Electronics is the fastest growing new industry in this region, but is still small. As the year ended, housing starts were up, highway construction was up, and commercial building was static due to the steel setback. Electrical wholesalers' sales for the first 10 months of 1959 (as against the first 10 months of '58) were up 7%. Latest per capita income: $1,530, up 2.8% over '58. Average gross weekly wage: $81.52. Population gain since 1950: 13%.

Mountain

Aside from a mid-year decline in housing starts, industrial activity for 1959 was uphill in the Mountain region. Commercial construction rose vigorously in March and kept at a high level until the steel strike had its effect in the latter part of the year. Electrical distributors' sales for the first 10 months of '59 compared with the same period in '58 showed a gain of 18%, highest in the nation. Latest per capita income: $1,909, up 3.7% over '58. Average gross weekly wage was $93.09. Population gain since 1950: 27.2%.

Pacific

The cry of "California here I come" sent housing starts and commercial building booming in the Pacific region in 1959. Highway construction was notably on the rise in this part of the country. Aside from the aircraft industry, the nationwide steel strike had little effect on manufacturing in this region. Electrical wholesalers' sales showed a gain of 17% for the first 10 months of 1959 compared with the first 10 months of '58. Per capita income: $2,265, up 6.3% over last year. The average gross weekly wage was $100.68, highest in the nation. Population gain since 1950 was 29.8%.

SUCCEEDING IN THE '60s

As the first step in a program to alert electrical distributors to the opportunities, dangers and changing demands of the 1960s, EW presents this three-article section. It offers ideas (1) on getting into industrial electronics *(starts on this page)*, (2) on product application trends *(page 71)*, (3) on market research needs *(page 74)*.

These Artcraft personnel* not only sell apparatus and supplies, but also insure that the . . .

Step-by-Step Approach Boosts Electronics Sales Day-by-Day

By Robert S. Bush

*Staff sales and management meetings, plus sessions with manufacturers' representatives, are designed to help solve electronic problems and to acquaint salesmen with new electronic lines. Seated above are (left to right) H. Dixie Howell, Morrie Weiler, Sales Manager Joe First, General Manager Ed J. Read, Manny Klein, Nick Gianoulis and Ray Hudson.

For the past two years, Artcraft Electric Supply has been selling industrial electronics "by ear." Here is how the program was started and how it has been successful.

Turn page for Artcraft's methods of selling industrial electronics successfully ⟶

'Electronic Selling Can Branch Out Into

INSIDE electronic control specialists Charles Price (left) and Bill Collins assemble electromagnetic pickup for customer in modification department.

Step-by-Step Approach (cont.)

PLAYING the electronics business by ear has paid off over the past two years for Artcraft Electric Supply Co. of Wilmington, Del.

As Sales Manager Joe First says, "We have to play this type of selling by ear. It's a new field, and although there is a demand for the products, the sale of one item might easily lead to the sale of another related item. We're infants in this field, and we don't know yet just where the field will lead."

• **Reports Stress Need**—Two years ago, Artcraft's management began noticing a rising customer interest in electronic supplies from salesmen's reports. Most of the interest shown was in the realm of automatic control equipment.

After discussing the importance of the electronics selling field with General Manager Ed Read and with his salesmen, First started looking for lines.

"We weren't quite sure what type of electronic equipment to take on," the sales manager explains "We estimated what our customers wanted, and then picked out lines we believed would be useful and good sellers for the future. We took the ball from there and our salesmen started bird-dogging the field for sales."

Artcraft's electronic program is incorporated as part of the overall industrial department. Six outside industrial apparatus and supply salesmen also handle electronic sales.

• **Step by Step**—The firm's first attempt in this new area involved electronic controls, both singly and in the form of panelboards made up to perform specific and special functions for the industrial customers.

From there, Artcraft took on what First likes to call "sophisticated" electronic equipment. This includes control equipment such as electronic timers, relays, magnetic amplifiers, proximity pickups and high-speed counters. Soon, salesmen found that to sell this type of equipment successfully, it was necessary to have replacement parts.

After these parts were added to the stock, the company took on and maintained a line of power stats and instrument lines.

As the business began to grow and to branch into many directions. First found that he needed catalogs for his electronic products. What started out with individual catalogs for tubes and powerstats has now developed into a large sales tool for the company (*see p. 70*).

Leading up to present, Artcraft has been a step-by-step company in getting into the electronic business. Management believes this type of selling is another form of performing a service to the customer and the industry. It is an attempt on its part to help enhance the overall electrical industry and to keep up with the times.

• **Dual Roles**—Because Artcraft's sales department was not divided to include a separate electronics division, the regular outside salesmen, in effect, have taken on an additional type of product for which they had little knowledge. Since this was the case, product training was necessary.

At present, all of the outside men have been trained just as much as they can be without having a technical background. Regularly, sales meetings are held to discuss particular problems which might have arisen with customers involving the sale or potential sale of electronic equipment.

"When we pool our ideas about how to approach a customer on electronic equipment, we usually come up with a solution," the sales manager says. "If one person doesn't know the answer or best approach, someone else might. It's just a matter of discussing the situation among ourselves."

For product training, regular

SPECIALIZING in powerstats, Ellis Dunlap (below) assists salesmen in this field. At right, in engineering department, Lou Owens, who specializes in instrumentation, collects data for salesman.

Many Related Products'

courses are held at Artcraft. These normally are presented by manufacturers' representatives, and include general information about how to sell electronic equipment successfully, and specific information about individual items.

Artcraft's salesmen do not operate by the hard-sell method. They merely suggest that the customer give some consideration to using automatic electronic equipment, and constantly remind the customer that Artcraft is equipped to supply the special electronic needs of the customer.

"In a sense, our salesmen are bird dogs," First says. "In seeing purchasing agents, engineers and plant maintenance personnel, they are in a position to know when an electronic application might be feasible. They even might suggest applications, and if the customer seems interested, will find out if they can become involved in the proposed work."

If the answer is favorable, the salesman attempts to make an on-the-spot recommendation. If he is unable to do this, he presents the problem to Artcraft's engineers. Then, the salesman and engineer discuss the problems and solutions with the potential customer for his approval or disapproval.

• **Technical Service**—With the exception of follow-up calls by the outside salesman, the service given to the potential customer originates at the office. All technical information and advice available to Artcraft is passed along to the customer.

If the customer makes a request, the engineering department of Artcraft will work with equipment manufacturers to develop layouts for specific electronic systems. However, First stresses that the company is not in the design business and does not want customers to feel that Artcraft is a consulting engineering house.

"Basically, we make suggestions and recommendations as to how the electronic application the customer wants will work best for his needs," First adds. "We just want to be a good distributor trying to help the customer. It's all a service, and the potential customer for electronics isn't obligated to buy our suggestions."

• **Salesmen Approve**—First lists eight reasons why his outside salesmen like electronic selling:

1. It gives salesmen something to talk about that not all distributors' salesmen can talk about.

2. It gives salesmen something different to sell.

3. It leads salesmen into the sale of many different types of products.

4. It builds up customer respect for the salesmen.

5. It gives the salesmen a more challenging and adventurous field in which to operate.

6. It gives them more versatility product-wise.

7. It leads them into larger package sales and more dollar sales.

8. It builds more creative selling.

• **Progress Files**—All information pertaining to an electronics sale or potential sale is kept in individual files according to the company name. During the progress of a sale, periodic reports are made to the customer bringing him up to date on the technical service being rendered, when the items will be shipped and the work progress of the installation.

All print files are kept in the sales manager's office. They are never disposed of because of their value for future reference. First always keeps a copy of the blueprint pertaining to a particular system that has been installed.

Then, whenever the customer asks a question about or has a problem with the installation, Artcraft personnel can look at the blueprint and possibly find the answer immediately without going to the manufacturer. This, he says, saves time for both the customer and distributor, and gives the customer more confidence in Artcraft as an electronics distributor.

As another confidence-builder, Artcraft personnel always edit each industrial electronics order to be sure the customer is getting exactly what he wants. If there is a question, the personnel will call the customer to see if the order is correct.

"The field of electronics is going to be an important key to selling to industry for the distributor. To keep abreast with industrial business, we have to perform our function in service to them in every direction," the sales manager adds.

Although General Manager Read believes it is difficult to plan on which direction this field is going to take from day to day, he also believes the outlook for electronic selling is optimistic.

"We believe there are many potentials," Read says. "Above all, patience is necessary. As a company, we all have to be prepared to know what the customer needs—and to have faith in what the future will bring."

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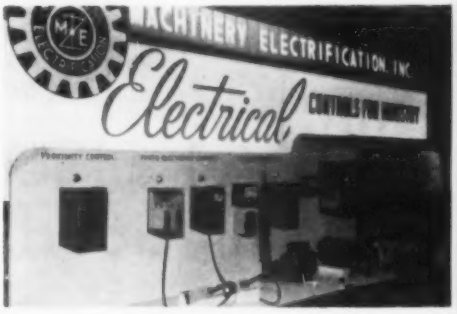
Exhibited by Artcraft . . .



. . . Electrical controls

. . . Speed drives

. . . Variable transformers

. . . Proximity controls

Last year, Artcraft displayed many electronic products at a local hotel. Nearly 1,500 engineers and p.a.'s attended the firm's "Automatic Electrical Controls and Control Accessories" show.

FULL-TIME work is required at Artcraft in putting catalogs together. Assembling components here is Nellie Durr.

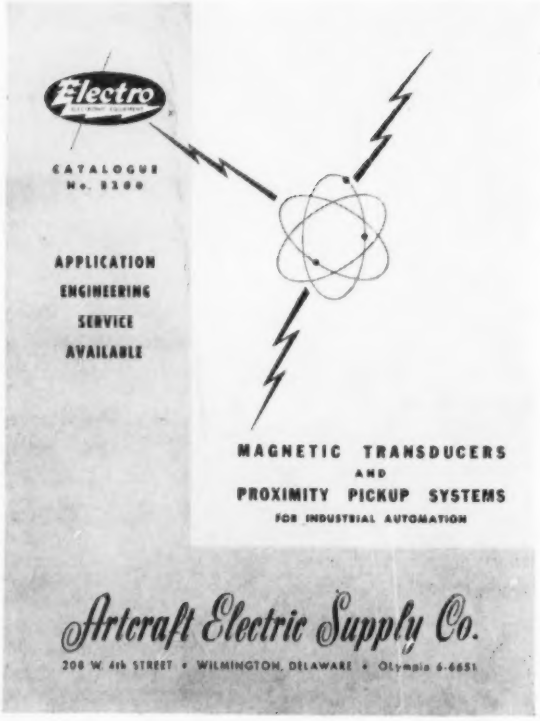
Catalog Service Aids Good Selling

Volume 1

1. Motors
2. Square D
3. G.E. Equipment
4. Machinery Electrification
5. Uni-Bus
6. Transformers Arrestors Fuse Cut-outs
7. Power capacitors
8. Dry transformers, Fluorescent ballasts
9. ELECTRONIC CONTROLS
10. MAGNETIC PICKUPS PROXIMITY CONTROLS
11. PHOTO-ELECTRIC LIGHTING CONTROLS
12. POWERSTATS
13. RECTIFIERS
14. ELECTRONIC TUBES RESISTORS
15. INSTRUMENTS—METERS, INSTRUMENT TRANSFORMERS
16. Liquid Level Controls
17. G & W Apparatus
18. Engine Generators

Volume 2

19. Boxes & Covers
20. Cutout boxes, Floor Recep'ts
21. Heating Devices
22. Conduit—Thinwall, Sealtite fittings
23. Conduit Hangers Supports
24. Condulets
25. Connectors Wirenuts
26. Lugs—Servits, T & B Stakons
27. Entrance & Ground Fittings
28. Fans—Blowers
29. Fuses—Accessories
30. Lamps—Flashlights, Batteries
31. Time Switches
32. Pole Line Material
33. Honeywell controls
34. Signaling Equipment
35. Insulating Tapes
36. Tools—Reelites, Torches
37. Screws—Anchors Toggle Bolts—Drills
38. Ideal Equip. Battery Test Clips
39. Signs—Markers
40. Wire—Cable
41. Wiring Devices
42. Wiremold
43. Acro-Micro Switches
44. Cope Material


Electro
CATALOGUE No. 8300
APPLICATION ENGINEERING SERVICE AVAILABLE
MAGNETIC TRANSDUCERS AND PROXIMITY PICKUP SYSTEMS
FOR INDUSTRIAL AUTOMATION
Artcraft Electric Supply Co.
208 W. 4th STREET • WILMINGTON, DELAWARE • Olympia 6-6651

For each individual line of electronic products Artcraft handles, the firm maintains a catalog, such as the one shown at left. These individual catalogs not only include product illustrations and information, but also contain articles about specific products in which various applications are described.

In these catalogs, which are given to industrial customers, are post cards on which the customer can request specific information about products or problems. Space is provided for the customer to request additional technical bulletins or the services of an application engineer. In addition, the customer may outline a problem and request a recommended solution.

In addition to the individual catalogs, Artcraft devotes several sections in its general catalogs to electronic products. These items start with section nine in the first of a two-volume catalog *(above left)*.

Listed under this section—electronic controls—for instance, are timers, potentiometers, relays, adjustable speed drives, load control, level control, motor load indicators, photo-electric equipment, counters and miscellaneous standard devices. Electronic equipment is capitalized *(above)* to show the relation of these lines with all other products included in the two general catalogs.

With the growth of Artcraft's industrial electronics business, there is an increasing need for an expanded electronics catalog service. At present, management is thinking in terms of compiling a separate catalog which will include all of the electronic lines.

SUCCEEDING IN THE '60s

Electrical design trends spotlight . . .

Products for '60's Systems

Here's a look at the wide variety of equipment and devices slated for use in the next ten years, with emphasis on important application characteristics.

MANY CHANGES and developments in modern electrical system design are pointing up products with high future sales potential for the electrical distributor's salesman.

Many of these products are already in widespread popular application; others have had only limited use in commercial and institutional buildings, being used almost exclusively in industrial plants. All, however, are fast becoming commonplace in all types of non-residential buildings.

High Voltage

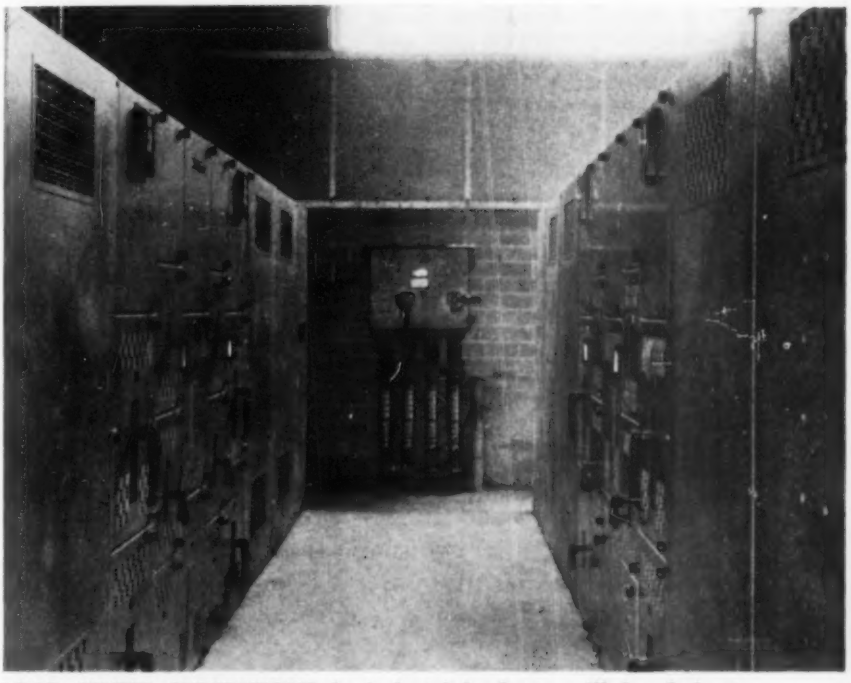
Probably the fastest growing area of electrical design is high voltage distribution. This involves circuits and equipment rated over 600 volts. A steady succession of new jobs reveals extensive use of outdoor distribution at voltages ranging up to 100-kv and some even above that level.

Such application is found in industrial plants with their ever-expanding demands for electrical power. Distribution at voltages up to 15-kv for indoor use—formerly found primarily in industrial plants—is now commonly found serving such buildings as: office buildings, schools, motels, air terminals and shopping centers.

Growth in the use of high voltage is readily traced to the unprecedented growth in the use of electric energy. Economics demands high voltage for efficient delivery of large blocks of power to concentrated load centers.

The manufacturers of electrical equipment have met the challenge by producing safe and reliable equipment of sturdy construction and excellent insulations for off-the-shelf use in high voltage systems. In the years ahead, the flow of such equipment into installed systems will be much like the flow of today's equipment under 600 volts.

The distributor will get to see such high voltage equipment more and more as time passes. And he better be looking closely at the specs and application characteristics on such equipment. A rundown on typical high voltage items is as follows:



LOAD CENTER SUBSTATIONS in industrial plants will be fed at 12,000 volts and step energy down to 480 volts for loads.

Unit Substations—These are unit assemblies containing a transformer for stepping from the high voltage—4,160 volts, 11-kv, 12-kv, or 13-kv—down to the secondary voltage level —480 volts or 120/208 volts, primary control and protection against faults in the transformer and secondary control and protection for load feeders.

Units range in sizes from 75-kva for small load concentrations up to 2,000-kva for industrial type load centers. Unit subs provide ready installation, supplied by primary voltage feeders. They offer engineered integration and coordination of the various components and are generally more economical than piece-by-piece makeup of the required transformer, controls and overcurrent protection.

Primary Voltage Transformers—Such transformers are made in an almost unlimited number of sizes and types. There are dry-type units which are cooled by air, air-cooled oil-filled or askarel-filled units and a number of types which use forced-air and/or forced-oil for cooling. Typical units are used in outdoor substations, transformer vaults or in building electrical rooms.

Transformers rated above 15,000

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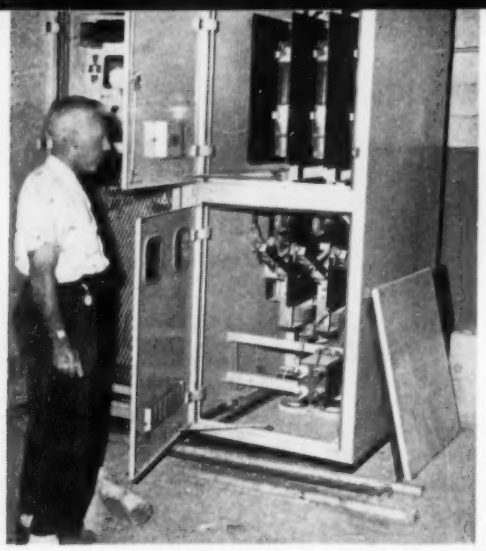
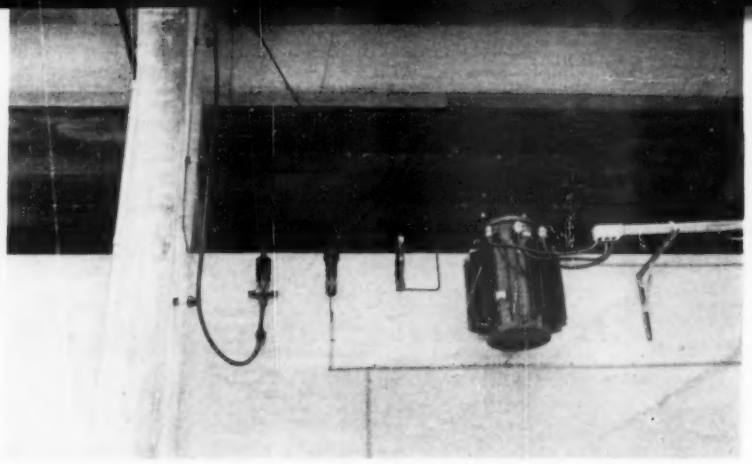
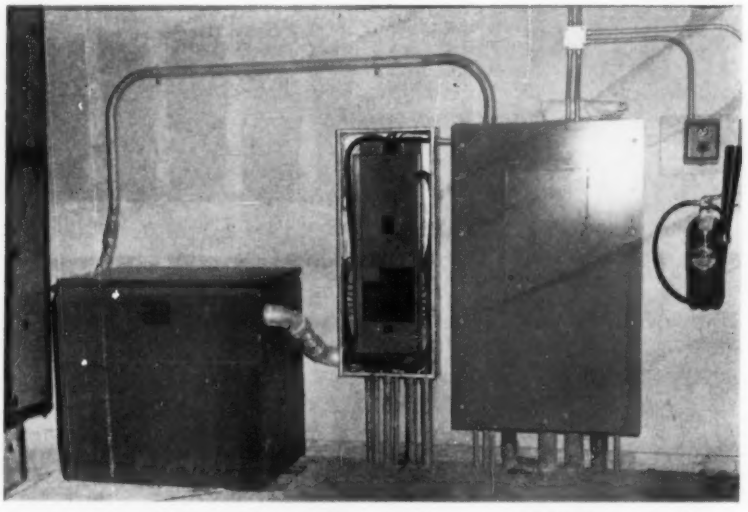


High voltage fused interrupter switchgear provides control and protection for high voltage transformers fed by primary line to plant.



13,000-v aerial cable circuit around a sports stadium has taps to step-down transformer through pothead and fuse cutout.



Dry-type transformer steps 480-v, 3-phase to 120/208-v, 3-phase, for receptacle circuits in a 480Y/277-v electrical system.

Design Trends (cont.)

volts must be used in a solidly constructed vault as set forth in the National Electrical Code. For this reason, indoor systems are confined to voltages not in excess of 15-kv. And with few exceptions, in small sizes, oil-filled transformers must be used in the same type of vault. Askarel-filled transformers do not have to be used in vaults.

Control and Protection—Switching and short-circuit overcurrent protection for modern high-voltage circuits up to 15-kv can be provided by—

•Power circuit breakers (oilless or oil-type) provide load switching, short-circuit protection, electrical operation, adjustable tripping, quick reclosing after tripping and differential relay protection for transformers.

•Load-interrupter switchgear can match the ratings and performance of power CBs with the exception of quick reclosing and relay protection—providing substantial overall economies in many applications. Conventional or current-limiting fuses may be used with this switchgear.

•Oil-filled cutouts, consisting of oil-immersed blade assemblies, with or without fuses, can provide switching or switching and short-circuit protection in primary circuits up to 8-kv, 300 amps. They are well suited to economical use as transformer disconnect and protection in lower capacity circuits.

High-Voltage Cables—Again a wide range of types and constructions are made for various specific applications and for general use. There are also premium and economy choices for particular applications.

Common types of cables are: rubber insulated with outer jacket, paper-insulated with lead jacket, varnished-cambric and interlocked-armor cable. High-voltage cables above 5-kv are generally provided with a metallic shield (of tape or stranding) to drain off static charges on the outside of the cable. Careful study is essential to effective cable application for primary circuits.

Some cables may be directly buried in the ground, others are for use in conduit or duct and the armored type cables are mounted on ladder racks or similar trays for support.

Potheads and Terminals—One of the most important elements of high-voltage circuit work is the method of terminating cables. Proper techniques will assure safe, dependable, long-life installations.

Basic requirements for general cases are as follows:

1. Use potheads on paper-insulated cables at all voltages.
2. Varnished-cambric cables should be terminated in potheads, but taped terminal connections are often suitable for dry locations.
3. Rubber-insulated cables are commonly terminated in potheads, but other terminations can be effectively made in accordance with manufacturer's instructions.

A pothead is a cable terminal which seals the end against entrance of moisture between conductors and insulation. It also increases the strength of the insulation at the cable end where electrical stress is heaviest.

Stress relief cones are used to protect against insulation failure at the terminals of shielded high-voltage cables. Manufacturers of cable and cable terminators make special kits for preparing stress relief cones for cables at various high voltages.

Secondary Voltages

Low-Voltage Transformers—These are the dry type transformers used for stepping from 480 volts to 120/-208 volts, 3-phase, 4-wire or to 120/-240 volts, single-phase, 3-wire.

With the surging popularity of 480/277-volt (or 460/265-volt) distribution systems in all types of industrial and commercial buildings, the dry type transformer has become a quantity item on each job.

Typical units are rated from 10-kva up to several hundred kva, from wall-mounting units to floor-standing units. These transformers supply the circuits needed for receptacle outlets and for miscellaneous incandescent lighting.

Load-Break Switchgear—This covers a range of pressure switches and electrically-operated devices for switching load currents in high capacity secondary voltage systems.

Load ratings for continuous operation range up to 5,000 amperes, with actual load interrupting capabilities above this value, even up to 12 times rated load current in the case of one load-interruptor.

This equipment is dead-front type, for ready use as service disconnect and protection in secondary systems. Proper fusing of such switches provides overload and short-circuit protection. Circuit breaker switchgear is also capable of effective application under the same conditions.

Circuit Breakers—For secondary voltage applications a higher order of engineering will be required for effective use of both molded-case and large air breakers.

Short-circuit interrupting duty must always be checked to assure safe application. Time-current characteristics which show the speed of circuit interruption must be analyzed in terms of available short-circuit current from the system at the point of CB installation, time-delay for transients like motor starting currents, let-through energy from time a fault originates until it is cleared and the coordination of the CB with other CBs or with fuses to assure a controlled sequence of circuit interruption.

In the latter case, it is always desirable to have a fault cleared by the protective device nearest the fault. In this way, when one branch circuit or branch feeder develops a fault, only the faulted branch will be disconnected, without affecting the main which protects a single line to a number of branches.

Expanded application of combination circuit-breaker-and-fuses will be made to provide safe and economical application of molded case CBs where the required interrupting duty for shorts would be too great.

In such cases, the CB handles overloads and shorts up to its rated IC (interrupting current) with the fuses taking over to open the circuit on fault currents in excess of the breaker's ability.

Fuses—Here's a really big area for improved application engineering to match the excellent fuse products made today to the safety and convenience requirements of modern electrical systems.

In any application, care should be taken to assure sufficient IC in any fuse for use at its particular point of installation. Then the speed of operation of the fuse should be studied to determine its effect on circuit operation from simple overload (just above its continuous current rating) all the way up to short-circuit.

Operation should be fast enough to prevent energy let-through during opening from damaging devices connected between the fuse and the point of fault.

This, of course, is also true for CB applications. And, again, fuses should be coordinated with other protective devices, i.e., for a given value of fault current through two or more protective devices in series (say, a service main CB, a feeder CB and subfeeder fuses) the preferred order of operation has the fuse open first because it is nearest the fault.

Current limitation in fuses should be studied in relation to the particular circuit requirements. Current limitation refers to the action of a fuse on a circuit when the fuse melts and opens so fast that the alternating fault current flowing does not have time to make a half-cycle alternation with the rms value it would have if the fuse were replaced with a solid conductor of the same impedance.

Current limitation reduces magnetic and thermal stresses on the electrical system conductors and components in the fault circuit.

Panelboards—Watch for the split-bus type with two or more separate sections of bus bars to provide control of groups of branch circuits.

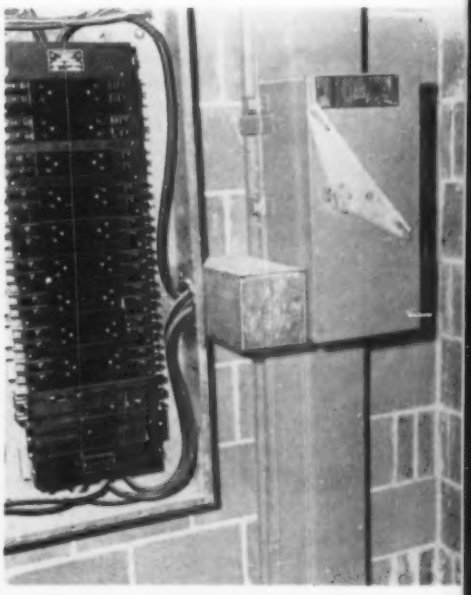
Typical application finds a magnetic contactor connected between sections of the main bus bars, with the branch circuits on the line side of the contactor operating conventionally and those on the load side under control of the contactor.

Then the contactor can be operated by remote control or can be operated automatically by, say, a time switch for control of outdoor lighting circuits. With the latter hookup, the outdoor lights will come on and go off at set times of the day.

Lighting Equipment—Look for real activity here as the industry makes giant steps to reach the new higher lighting levels recommended by the IES.

More efficient lamp sources will be forthcoming. High frequency lighting—use of ac current at 1000 cycles per second instead of 60 cycles—may catch on very fast to meet the new light levels economically. In any event, a large swell in the general volume of lighting sales can be expected.

Split-bus board with remote contactor for branch circuit.



Molded-case CB protects tap conductors and panelboard.

SUCCEEDING IN THE '60s

The Case for Market

Market research is a little-understood, little-used tool in the electrical wholesaling industry, yet it offers great promise in problem-solving and market development. What's more, it can be economical, whether you pay a research man a small fee for helping plan a research program, or send him out on a small project, or contract with him for a sizable program. Here are some essential facts to help lift the mystery and clear the skepticism surrounding this most practical subject.

Some Quick Facts On Market Research

- The market research business is a fast-growing field which had its beginnings nearly 30 years ago when some hard-headed, practical consumer goods manufacturers decided it might be smart to find out what housewives liked or didn't like about their products so they could make improvements and sharpen their sales techniques.

- Market research and management consulting firms are no substitute for shrewd judgment on the part of key executives—whether they are in manufacturing, wholesaling or retailing.

- Market researchers must tailor their research to fit the problem they have been asked to solve. Some of the thorniest problems can be solved quickly; some of the most straightforward problems may require thousands of interviews.

- Are market research men practical businessmen or do they have their heads in the clouds? Have they been exposed to on-the-firing-line problems or are they over-educated Ph.D.'s? The head of a leading research firm was a watch salesman. Another research company head was a reporter. Still another was an account executive at an advertising agency. Turning this around, the head of a major network was a research man; the merchandising director of an electric truck manufacturer grew up in market research; and the head of an electronics firm started as an interviewer for a research firm. These research people are indeed practical men.

THE CONTINUING rapid expansion of the electrical industry heightens the need for solutions to many of the problems faced by both manufacturers and distributing firms. A key executive in a manufacturing firm may have summed up the feelings of many when he spelled out some of his concern this way:

"I wish we could be sure we're exploiting our full potential for sales on an item. When an established product takes a dip in sales, you don't know whether it's because your service has slipped, or the distributor got mad at our representative, or what. Maybe it's because our advertising doesn't get to the user enough. And maybe it's just a declining market.

"Take a new product. The same kind of questions come up. We're not the only ones who have seen a need and have had salesmen tell us a product will really go—only to have it fall on its face. Maybe the price was wrong or the advertising wasn't right. And maybe there just wasn't that big a need. How can you figure and be sure what your potential market's going to be for a new item?"

Change a few words and phrases, and those words could have been spoken by a distributor, just as could—with a few changes—the following remarks of the manufacturing executive as he went on:

"There are still broader problems all of us face in this industry. One of them is this business of selling direct rather than through distributors. How much it hurts the manufacturer in the eyes of the distributor is just one question. Another is just how much the distributor gets hurt in the eyes of the ultimate user."

• **Common Denominators**—Not only must questions such as these have a ring of truth to anyone in the electrical industry, but nods of understanding could be expected from an executive of a materials handling equipment manufacturer, or key people in a toothpaste company or a steel company, or a distributor handling cosmetics at the wholesale level. The products are different, the selling and distribution methods are different, but broadly speaking, the problems are the same: why does an established product sag in sales, what is the potential for a new product or a new approach, what is the effect of policies of one kind or another on profits? And in trying to find solutions, many companies—at all levels of American industry—have come to rely on market research as an invaluable tool and a vital aid to shrewd judgment.

Why do they turn to market research? In what ways has it been helpful? Generally speaking, market research was turned to and found to be of help because it is a technique which involved finding out, in systematic fash-

Research

By John F. Kraft*

President
John F. Kraft, Inc.
New York, N. Y.

Value of Market Research—Another Viewpoint

. . . There is good reason to believe that the use of market research has not been very widespread or penetrating in the electrical wholesaling industry, which is rather surprising in view of the industry's rapid expansion in recent years and of its promising future. . . . There are quite a few distributors who are not too familiar with the art or science of market research or the functions that a market research organization is capable of performing—*Albert J. Borelli, "Selective Distribution as Related to the Independent Electrical Wholesale Distributor," page 83, November 1959 issue.*

ion, just what are the opinions held by people who might affect sales of a product. Sometimes this might mean housewives need to be asked for opinions, it might mean that the solution lies in talking to men who use a specific product, or it could mean finding out how just a few key executives feel.

• **Cases in Point**—Here are some specific illustrations of research which was found useful, presented in thumbnail-sketch fashion.

• A beer company hired an outstanding research firm to find out from bartenders why sales weren't higher. For an investment of $3,000, the brewer found that he didn't have to change the flavor of the beer or the label, or go through the expensive process of hiring new salesmen. It turned out that rival companies were offering special discounts to have their products "pushed," and it was more economical for the company to wait them out.

• A metals manufacturer invested $2,000 to find out that his key customers loved him more than ever, that he was not subject to criticism and that declining purchases were attributable solely to worries about the recession.

• A hoist manufacturer employed a leading research firm to find out from distributors why they were not recommending his line. It turned out they thought the product was the finest, but the service the worst; and for $2,500 invested in market research, the manufacturer decided to concentrate on service rather than attempting the expensive process of finding new products which might or might not be better.

• Fifty interviews with housewives for $800 told a toothpaste manufacturer his product was not only mediocre but completely repulsive.

• An automobile manufacturer found it the better part of wisdom to find out from new car purchasers what went wrong with their cars that annoyed them most—and it was considered a sound investment to contract for a research project costing $50,000 on his problem. Yet at the other end of the scale, consider the company that spent $500 to find out from men who had just bought its product what it was they liked about it—by way of guiding future sales and advertising efforts. Or the political candidate who invested $750 of his difficult-to-collect campaign funds to have a research firm talk to voters and find out what issues voters really were interested in hearing him discuss.

• One magazine spent over $100,000 for research that could be used as part of an extensive ad campaign showing high degree of readership. Still another magazine spent $1,000 to show that a selected few key people in the government relied on its pages for information.

• **Five Facts**—With these few illustrations, a few basic facts emerge:

1. Research can be as expensive as all get-out, or it can be pretty inexpensive. (But it should never be "cheap.")

2. Market research can involve interviewing thousands of persons, or it might be tailored to interviews with a very few but crucially-important persons.

3. Market research can be invaluable in confirming judgment, but it can be still more valuable in discovering the unsuspected.

4. Market research has guided new product development; it has also helped define the location and nature of potential markets.

5. Market research has pointed to increased or stepped up exploitation of present markets.

• **Can You Use It?**—Of course, it's all very well that toothpaste companies or hoist manufacturers have found uses for this tool called market research. But can it be made to work in the electrical wholesaling industry? A distributor might have put the question this way:

"Well, I can see that research doesn't have to mean a thousand interviews, and it doesn't have to cost an arm and a leg. But can I use it to find the answers to my special problems? What can market research do to tell me why sales of one of my basic commodities are slipping?"

The answer to a question like this lies in understanding who buys the product and what they use it for. Once such questions are answered, then market research can begin to zero in on the problem. For example, if orders from contractors have been declining right across the board, then a market research firm might suggest going to a representative group of them—big ones, little ones; near ones, far ones; those with rapidly declining purchases and those whose purchases have slipped almost imperceptibly. And it might cost somewhere between $1,000 and $3,000 to conduct a thorough survey of that nature within a state. On the other hand, possibly the decline in sales is attributable almost entirely to five or six large contractors, and while it might be a more complicated process to elicit direct answers from such people, the scope of such a research study is much more narrow and results of an operationally useful nature could probably be secured for under $500.

Regardless of the cost and who has to be interviewed, the problem of eliciting objective opinions is far from a new one to the many market research firms which have conducted surveys among druggists, Senators, voters, jobbers, hardware store owners, smokers, gasoline station

*Author Kraft heads up his own market research and management consulting firm. He has been in the research field for 10 years. Prior to forming his own organization, he was a key executive with two other national research firms, Louis Harris and Associates, and the Elmo Roper organization.

CONTINUED

Do-it-yourself approach has its drawbacks

operators—to barely begin making a list. And the key problem has not been one of eliciting opinions, but one of understanding the nature of a problem and the kinds of questions which might be asked.

• **Can You Do It Yourself?**—"That's another point," a distributor might say. "In view of the difficulties in understanding the electrical industry, why doesn't it make more sense for me to have my salesmen go out and ask contractors what they don't like about us or our service or our products? Then I save the expense of doing research, and I can be pretty sure the people asking the questions know what it's all about!"

Certainly these are reasonable questions—and there are reasonable answers. In the first place, it hasn't been necessary in the past for market research people to learn the absorbency quotient of gauze to find out why housewives prefer one brand over another. Research men have never needed to understand fully the intricacies of a gear motor to discover that a manufacturer delivers poor service on broken-down equipment. Nor does a research man have to understand the complications of special cable insulation to find that customers think prices are outlandish. Of course, any research man wants to know and understand the problem he must deal with, and like most businessmen, he is dedicated to delivering an honest job based on necessary knowledge.

Put another way, it isn't necessary to teach an accountant the intricacies of the electrical business to have him handle your books correctly—not anymore than it becomes obligatory for a lawyer to go through a special course to insure proper handling of your legal problems. In short, a market research firm is one which has specialized in the field of finding out what people think on a tremendous variety of questions. From the beginnings of Elmo Roper and George Gallup of 30 years ago, there are now literally hundreds of successful, dedicated and honest firms employed by American industry to find answers to this basic question: how can I be more successful in my market?

• **Questionable Practice**—Then part of the answer to the "do-it-yourself" approach or in having salesmen do it for you lies in understanding that market research is a very special field of training. But equally important is the necessity of understanding that it may be just bad economic and business practice to have salesmen do research for you.

Why? You know your industry. You know the questions you need to have answered. Then why go "outside"? Using the same analogies cited above, even if you are a better lawyer or a better typist than the people you hire, it is better business practice to go "outside" for such talents because they can be performed more economically than you can perform them. And taking the example of having a salesman do your research for you, it is almost self-evident that the wisest way for a salesman to spend his time is making sales—and not in being a lawyer or a typist or even a market research man.

More important than whether you or a salesman is equipped to ask the right people the right questions in the right way is the question of whether you can get the right answers. Is a salesman geared to finding out what you want to know? More probably he'll try to anticipate what the home office would like to hear and ask questions that will produce just that. Or even being well-intentioned, his long background training of asking leading questions, all designed to get a commitment for a sale, may well lead him to asking the same kind of questions—leading ones—which don't add up to objectivity.

Let's look at the do-it-yourself approach from the customer viewpoint. If your own best friend doesn't like your product, will he tell you? Probably not. And, like him, many good customers would rather keep peace and enjoy that game of golf or the drink with you. Even more importantly, if such a customer does complain to you, he probably doesn't want to get into a dispute. And what kind of a businessman would you be if you didn't defend your company and service when challenged?

Over the years, researchers have compared, time and again, the results of their analysis with those of clients. In this connection, perhaps a political analogy here is a good one. A candidate for office rarely if ever encounters people who express dislike or disagreement with him. The voters who feel this way express themselves entirely adequately and perfectly effectively at the polls. So it is with businessmen—and most effective proof of success is increased sales. Customers register complaints simply by not deciding to buy.

• **Try It Out**—But the point in question is not how to do research or why market research men should be called in to help out, but whether market research can indeed offer solutions to problems. Perhaps the best approach to find an answer to this question is to throw a problem at one of the professionals in the field and see how he fields it.

But without a specific problem, then the basic analogy must be returned to: more electrical manufacturers and distributors should pause long enough to contemplate and discover whether or not market research as used by countless other segments of the American economy can assist in making life easier and marketing decisions more on-target—all at a cost that is often returned in much better profits.

Tips on Finding a Market Research Firm

There are a number of ways to locate a market research firm. Ask your Chamber of Commerce or the Better Business Bureau. A professor of marketing or sociology at the nearest university probably would have suggestions. Your advertising agency would be pleased to recommend. And in any large city, the Yellow Pages provide listings. Perhaps as good an approach as any is to contact the local chapter of the American Marketing Association and ask for advice. If none of these are of avail, write EW and we'll see if we can help. (It should be borne in mind, however, that the vast majority of research organizations are located in or near the five or six largest cities—especially New York.)

Note: You should feel no reluctance about contacting research firms if you have the slightest suspicion that a need for research may exist. It is standard procedure for a research firm to be presented with a problem, come up with what it feels is the best solution, and then together with an estimate of cost, describe what it feels to be the best approach. The potential client can always say "No, thanks!" with no further commitment.

For Tucson Electric Supply's

inventory-taking . . .

WITH HEADSETS, Tucson Electric Supply workers talk directly to inventory control. 30-foot cords enable free movement. Before inventory, warehousemen prepared count tags.

Four Circuits Save Four Days

BECAUSE its management was fed up with the high cost and the physical strain of conventional inventory-taking, Tucson Electric Supply Co. invested about $120 with the telephone company and saved $700 and four days during inventory.

The Arizona electrical distributor used four temporary telephone circuits to connect inventory takers in the warehouse with workers at the Kardex perpetual inventory file and with the inventory control center. The result: inventory time was reduced from seven to three days.

Of particular importance, says partner Al Kaplan, was the improvement in employee relations resulting from the new, faster system relieving workers of the long week of strain that once characterized the inventory bore-chore.

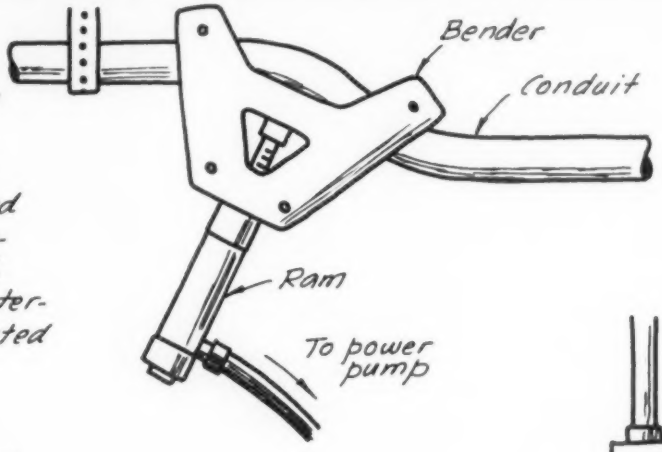
INSTALLATION of four temporary telephone circuits in the warehouse and offices of Tucson Electric Supply brought this distributor about $700 in savings at inventory time. Adding still another circuit for the 1960 inventory will increase savings to $1,000, says partner Al Kaplan.

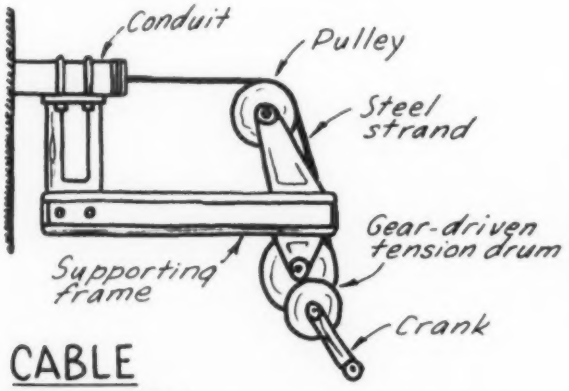
AT KARDEX, workers check phoned-in actual count against recorded stock amount. If there is any discrepancy, a recount can be made before entry is made.

AT CONTROL CENTER, sheets are filled in after hearing warehouse and Kardex agree. Inventory is priced and recorded. Phones enable checkers to verify immediately.

POWER BENDERS,

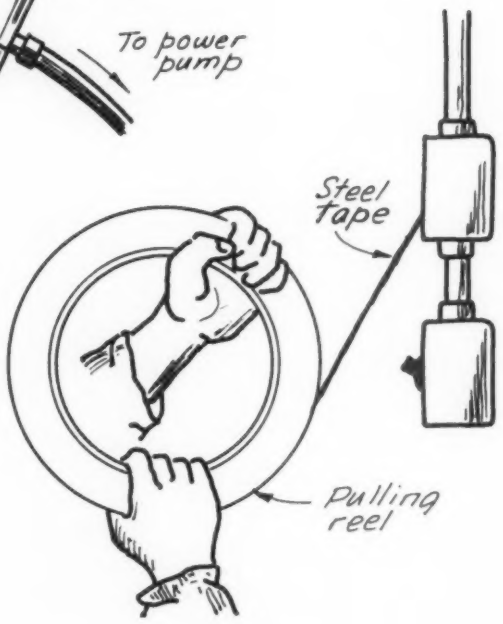
lightweight and portable, may be used on the ground or with conduit already in place. Power from hydraulic pump drives curved bending shoe against conduit to accomplish bend. Length of stroke is predetermined, and ram is adjusted accordingly.





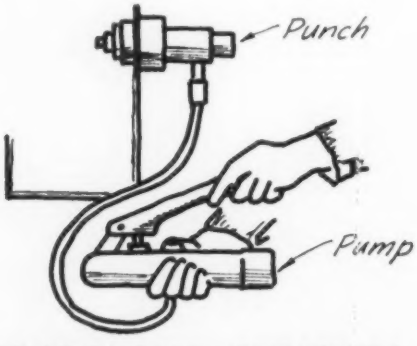
CABLE PULLERS

for large cables may be positioned and fitted with auxiliary rollers to pull from horizontal or vertical conduit, exposed or concealed. Crank may be replaced by portable power unit.



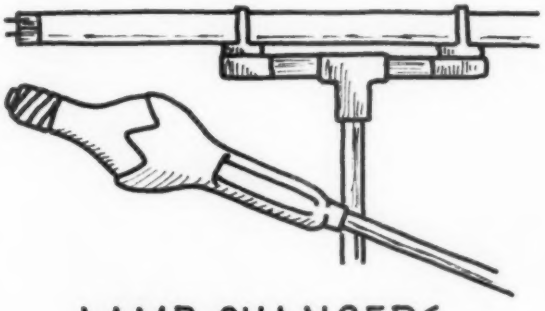
FISH TAPE

and reels simplify pulling of smaller conductors through conduit.



KNOCKOUT PUNCHES

with hydraulic hand pump and set of various-size punches permit cutting of knockouts after cabinets are installed.



LAMP CHANGERS

simplify replacement of incandescent and fluorescent lamps without ladders.

Pinpoints the Information You Need on . . .

Tools

By J. F. McPartland and W. J. Novak

THE VARIETY of tools used in electrical construction and maintenance work is almost unlimited. Such tools range from small hand tools to very large power driven equipment. The following is a rundown on typical tools and their applications.

Hand Tools

Of course, the most common tools in this category are the various types of pliers, wire cutters, screw drivers, wrenches and penknives used by electricians.

These and other small hand tools need no elaboration. There are, however, a number of special hand tools:

Wire Strippers are made in a number of hand types for ready skinning of insulation from wires for splicing and terminal connections, without nicking the conductor or cutting any strands.

Fish Tapes are made in several types to provide ready passage through conduit and duct to pull circuit conductors back through the raceway. The steel fish tape is the old standby, consisting of a length of flat or round steel for pushing and working through raceway. One such fish wire comes with a reel which serves as a handle for the mechanic working the tape, providing positive grip and tape control.

Another fish line device consists of a hand gun which uses a jet cartridge to "shoot" a nylon cord through the raceway. Still other compressed-air methods are used for fishing through conduit.

Label Embosser is a hand-held pliers-like device for embossing metal or plastic tape for use as identification labels on conductors, terminals, cabinets, etc. The device contains adjustments for the numbers and letters used to make the labels. The embossed tape is readily attached by its pressure sensitive back.

Conduit Tools

Cutting Tools for conduit range from the hand hack saw to the speedy metal cutting band saw which can be used to cut bundles of conduit. High-speed, power driven, abrasive cut-off wheels are also used.

Conduit Threaders are today primarily power driven machines which do a highly efficient cutting and threading job for all sizes of conduit. Priced well within the tool budget of any contractor, these units are readily transported on the job. For threading at-point-of installation, power threaders are made in hand-held, portable types. Such devices can be used to operate dies and conventional threaders for up to 6-in conduit. They can also be used as cable-pulling winches and earth augers.

Conventional cutting and threading machines are made in floor-standing models with integral electric drives and complete accessories for the modern conduit job.

Conduit Benders are made in both manual and power-driven models to cover the full range of sizes of rigid steel and aluminum conduit and thin-wall (EMT) conduit. For the smaller sizes (up to 1 " conduit) of conduit and tubing, the hand "hickey" is considered the most practical and efficient tool. For all type of bends and offsets in the smaller conduit sizes, hand benders on portable pedestals provide accurate control, are fast loading and easy to use. One such type is the ratchet bender which permits short strokes to make the required bend.

Power benders using hydraulic pistons powered by hand-operated or electric driven pumps are made in many modern types for quick and easy bending of large size conduit. Such benders are made in table mounted units or completely portable assemblies of bending-shoe-and-piston unit with separate hand pump. The latter unit can be used to bend and offset conduit in any position, even conduit mounted overhead. In recent years, the "one-shot" bender has gained much popularity because of the speed and ease it adds by making bends with just one "shot" or stroke of the bending ram against the conduit in the bending shoe. This type of bender provides great economy in bending, in many cases proving the difference between use of field bends or manufactured elbows.

Pipe Pushers are hydraulically powered ram assemblies used to push conduit through earth. They are used for installing underground conduit without digging a ditch the length of the conduit run. Only a working hole must be dug to provide positioning of the pusher. This technique of conduit installation is used where conduit is to be installed under existing concrete —such as a sidewalk, a driveway, etc. A typical pushing job used a gasoline-engine driven power pump for the hydraulic pressure to push 45 feet of 3½-in. conduit under a 26-ft. wide city street.

Cable Tools

Pulling Equipment used to pull wires and cables into conduit and other raceways varies widely in type and size to meet the requirements of various jobs. Such devices can range from the conventional fish-tape pullers for relatively small circuit work to large manual and power winches for pulling large cables or for long or difficult pulls on groups of small cables. One-man operation of small hand-held unit power pullers provides fast efficient wiring of conduit on much branch circuit and small feeder work. Other power pullers consist of truck or platform mounted units made up of large, high power winches with adjustable-speed drive, adjustable boom and pulley attachments or other features to provide a strong pull with adequate bracing of the pulling rig. Selection criteria for a power winch application are pulling force, portability and ease of setup. Power for the smaller, portable cable pullers is generally provided by electric motors with ready power cord connection to an outlet. The larger capacity pullers and power winches are commonly driven by gasoline engines. These larger units often have four-wheel bases for ready mobility and adjustable capstans for any direction or angle of pull.

Cable Reels of many types are used in modern electrical work to facilitate many steps in the payout of wire and cable into conduits. Many contractors provide special reeling of the proper number and lengths of conductors for specific jobs. Such pre-work preparation of wire and cable can add real speed and efficiency on the job. Other cable reel units combine a number of individual reels on a large rolling frame for selection of various sizes and types of wires to meet varying job requirements.

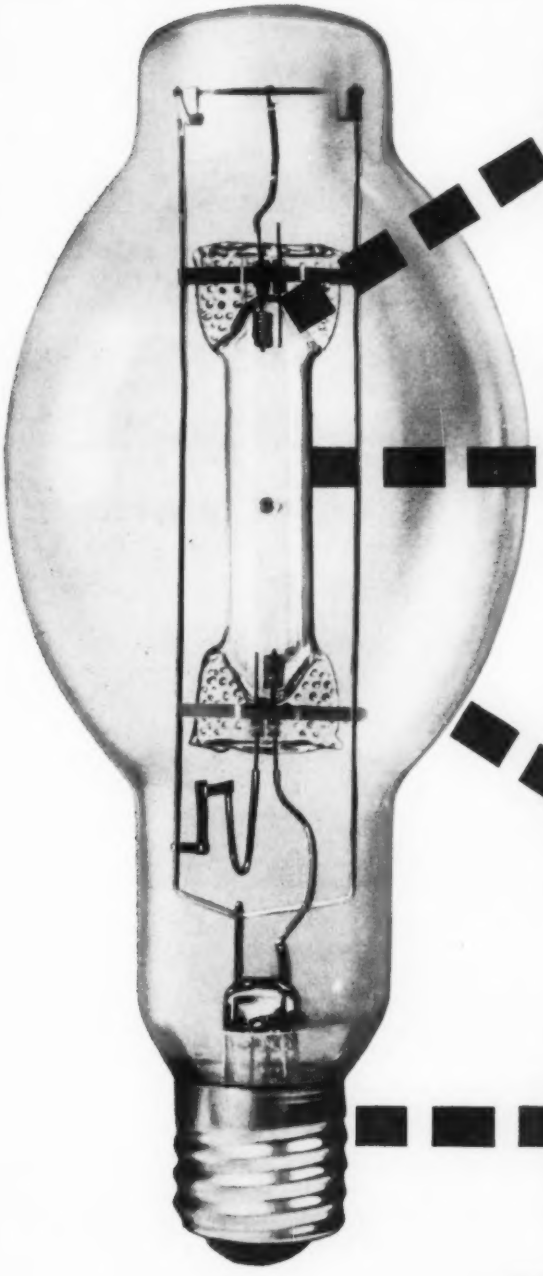
Next Month: Tools—II

EXCLUSIVE WEATHER LIFEGUARD™ ARC TUBES YOUR BEST BUY IN MERCURY LAMPS!

By any standard of comparison, new Westinghouse "Lifeguard" mercury lamps are the most economical choice for industrial, street, and parking lot lighting. The exclusive Westinghouse "Lifeguard" arc tubes in these lamps save you money by maintaining high initial light output longer. And, they make possible lower-cost new lighting installations.

In addition to getting more light per dollar, you save on labor and maintenance costs, too, with less frequent lamp changing. And "Lifeguard" lamps are made with famous Westinghouse "Weather Duty" bulb construction for resistance to thermal shock, moisture and all industrial fumes. New Westinghouse "Weather Duty" lamps with "Lifeguard" arc tubes are interchangeable with other types of the same wattage. Make the change today. Contact your authorized Westinghouse lamp agent or nearest Westinghouse sales office.

DUTY™ LAMPS WITH MAKE WESTINGHOUSE



New design electrodes with specially-compounded and locked-in emission material virtually eliminate light-robbing arc tube blackening.

"Lifeguard" arc tube improves lumen maintenance . . . 85 percent of initial light output after 10,000 hours.

First with "Weather Duty" lamps . . . fume-proof and moisture-proof, shock-resistant glass.

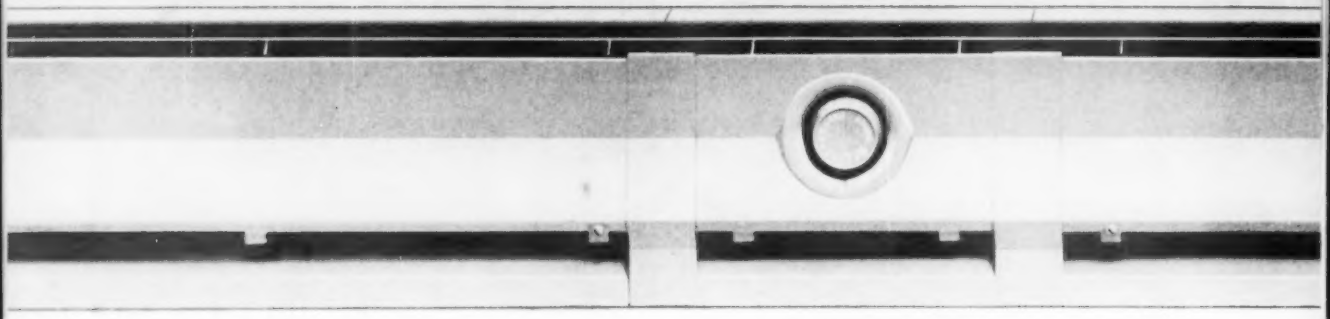
Permanent-grip silicone cement holds bases tight for the life of the lamp. Remains strong at high temperatures. No strain on glass.

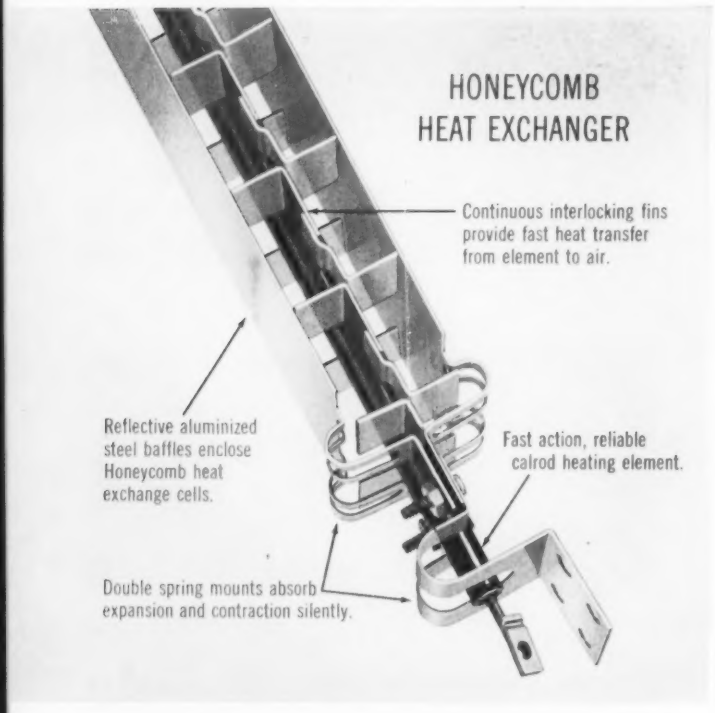
YOU CAN BE SURE... IF IT'S Westinghouse

Westinghouse Lamp Division · Bloomfield, N. J.

Better than ever!

R&M-HUNTER




HONEYCOMB
HEAT EXCHANGER
Continuous interlocking fins provide fast heat transfer from element to air.
Reflective aluminized steel baffles enclose Honeycomb heat exchange cells.
Fast action, reliable calrod heating element.
Double spring mounts absorb expansion and contraction silently.

New, exclusive HEAT EXCHANGER increases warm air delivery

In the new R&M-Hunter Convection Baseboard, heating engineers have combined a fast-action, highly efficient calrod heating unit with newly designed Honeycomb heat cells of non-corrosive aluminized steel. The result is greater metal-to-air ratios, providing more efficient heat transfer at lower surface temperatures.

AIRFLOW DESIGN DELIVERS HEAT WHERE IT'S NEEDED

Directional outlet speeds circulation of warm air into room, away from wall. The advanced design of the R&M-Hunter Convection Baseboard achieves a 9 to 1 ratio of warm air delivery to radiant heat.

FEATURES

High and low density — For concentrated heat loss area, higher wattage sections may be used (below a window, for instance). Low wattage sections spread heat source evenly for better comfort control.

Automatic controls—Individual built-in room thermostat sections control comfort levels in each room. This eliminates wasteful overheating in one area to provide comfort in another. Insures efficient use of power.

Complete safety—Casing temperatures are always low. Can't harm sensitive skin of children. Won't damage fabrics that can be ironed with "medium" setting.

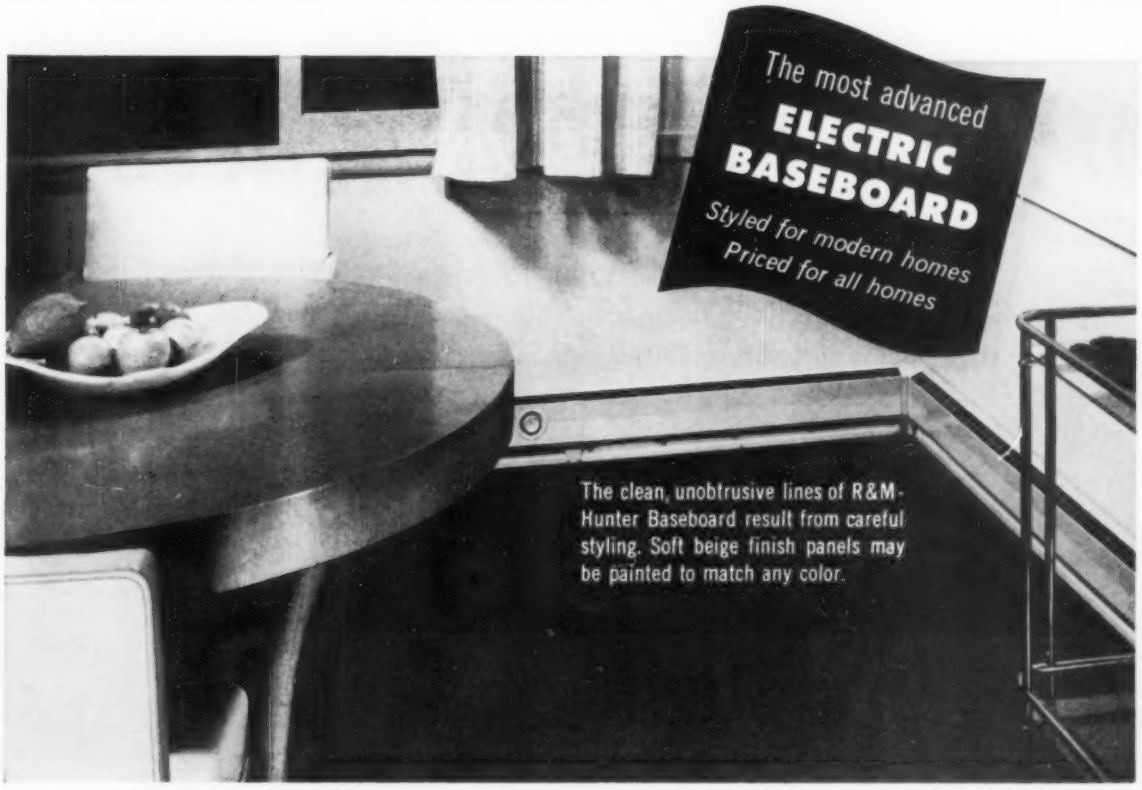
Thermal cut-out—Each baseboard section has a thermal cutout switch. This prevents any overheating that might occur if the air flow through unit were restricted or shut off.

Silent operation—Operates without sound. Heat exchange assemblies and baffles are separately spring mounted to prevent expansion or contraction sounds resulting from cycle operation.

Accessories—Convenience Outlet Sections (240 or 120 volt). Dummy Sections. Matching End Plates and Corner Pieces. Built-in Thermostat Sections. Wall Thermostats also available for use where desired.

Other data—240 and 208 volt sections available. Lengths of sections: 32″ and 48″. 6⅜″ high x 2¼″ deep. High density sections approved for dual voltage.

Convection Baseboard


The most advanced
ELECTRIC
BASEBOARD
Styled for modern homes
Priced for all homes
The clean, unobtrusive lines of R&M-Hunter Baseboard result from careful styling. Soft beige finish panels may be painted to match any color.

MAIL COUPON FOR COMPLETE DATA

R&M-HUNTER Convection Baseboard Electric Heat

NEMA R&M HUNTER

It's Matchless!

Hunter Division—Robbins & Myers, Inc.
2470 Frisco Avenue,
Memphis, 14, Tenn.

Send complete data on the new R&M-Hunter Convection Baseboard to:

Name _____

Address _____

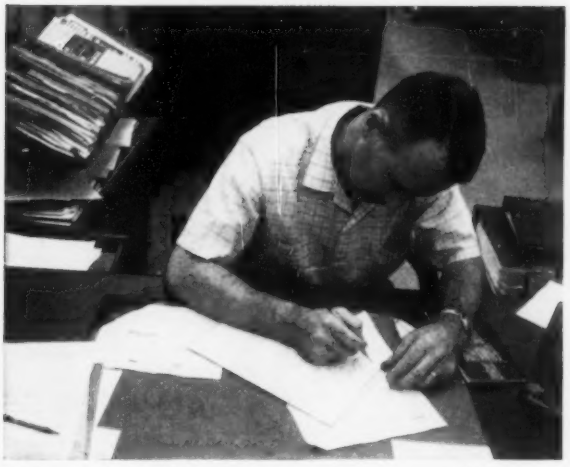
These are distributors.

"Edwards sales programs are building our signaling business"

This is typical of comments coming from distributors across the country. National and regional associations are lending their endorsement to these sales programs. Chains are encouraging their branches to participate... ("Every plant we call on is a prospect for signaling equipment and the industrial program is designed to help our salesmen make the most of their opportunities in this huge industrial market. Its sole purpose is to create business, and it will"—Graybar)... ("We have reviewed these plans with Edwards sales management and recommend them as ideal creative business builders for both the branch and your salesmen"—Westinghouse Electric Supply Company). Independent distributors too, are using these programs to advantage:

Dever & Edds, Inc., 19 year old distributing firm in New York City, finds Edwards' "Industrial Modernization Program" ideally suited to their situation as they concentrate their sales and stocking policies in the industrial market. "Banging on doors to find prospects makes good sense", says Edward Dever, firm Vice President. "But once you find your prospect, you've still got to sell him. This program gives us ammunition to do the job". He explains that a signaling sale to an industrial plant does not stop with bells, or horns, or a fire alarm system, but may go on to include wire, conduit, connectors—in short, a full range of electrical equipment.

In going through the 3-step sales program, Dever found that each element could be utilized as a part of a *regular* sales call. "The first thing to do is to analyze customer needs for communication and protection equipment", says Dever.



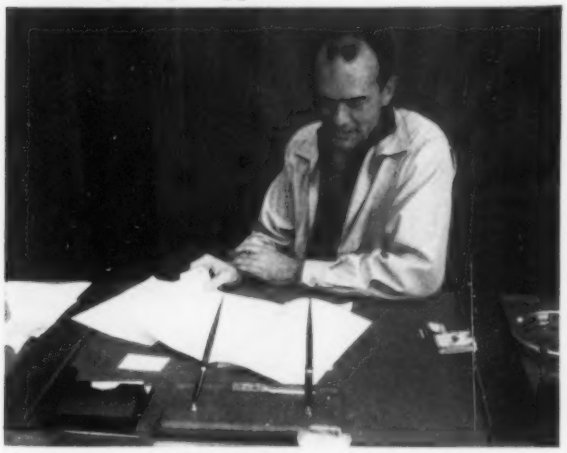
On the basis of this analysis, the D&E salesman draws up a tailor-made presentation of recommended equipment, using materials and guides supplied by Edwards. It could include a letter outlining the recommendation, detailed information and rough installation layout of the proposed equipment.

After this rough plan is presented, the salesman continues to follow-up the prospect until a specific quotation is made. Other Edwards selling aids are also used; a work progress report sheet for the salesman, a descriptive page on Edwards, the Signaling Log (which describes quickly all types of equipment for industrial installations and OEM applications) and special promotional literature. Even order forms for obtaining more components of the program are included.

Situated in suburban Rockland County, New York, Swift Electric Company puts a lot of emphasis on the residential market. According to August Sodora, President, 85% of the firm's customers are small electrical contractors. "These contractors look to Swift for 'expert' advice on electrical products and applications". To merchandise this service they use Edwards' PI (Product Information) Program. It sells more than just products; it sells the distributor, his organization, and the concept of assistance and knowledge.

"Any sales force can get bogged down and fall into careless selling habits", says Sodora. "But PI has given us a real pep pill. Not only does it keep us on our toes; it moves electrical goods". Swift's 15% increase in signaling sales alone is concrete proof of the effectiveness of the program.

Another innovation that is responsible for Swift's success is a weekly sales meeting at which time they go over one signaling product and its applications. For one week they aggressively sell this product. At the end of the year Swift finds that their sales force and their customers have a working knowledge of the full range of signaling products.

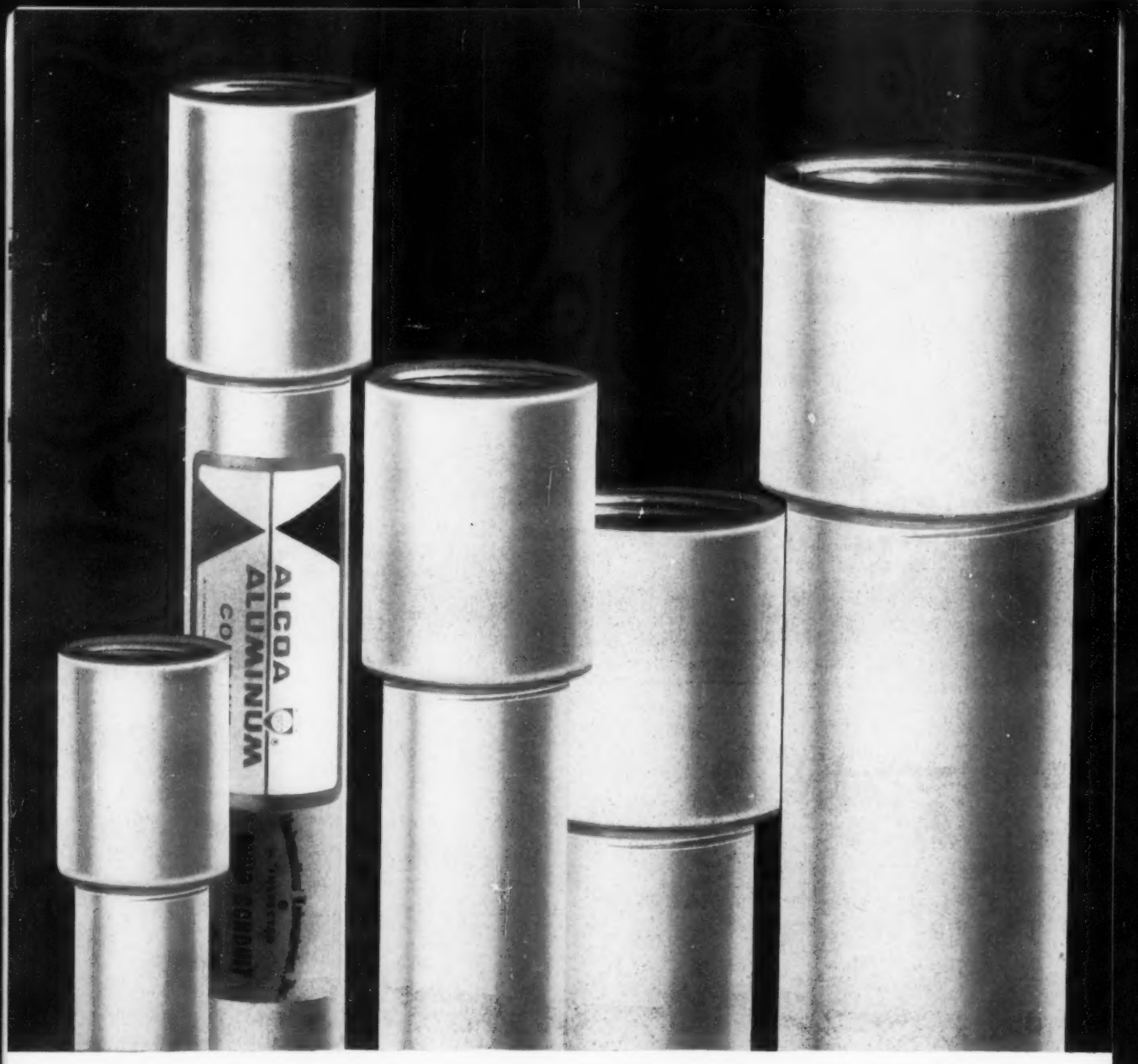


Joseph Hennesy, Manager of Swift, finds practical advantage in the program. First a letter introduces the newer, faster method Swift has for supplying product information to its customers. For personal selling there is a unique gummed-backed mount-a-card envelope to hold a salesman's personal card or memo which is left with all literature and sent with information mailings. A regular mailing service from Edwards, "Digested facts of modern selling", outlines for Swift salesmen tips on how to keep customers sold.

Even the office staff finds elements of the PI Program can be quickly incorporated into their regular direct mail procedures. Edwards provides a variety of imprinted material.

The Edwards Company believes that distributors have an important but sometimes under-rated job to do in the electrical industry. Often we run across men in distributing who are doing their job very well indeed. We're glad to be able to pass along their ideas.

EDWARDS *Specialists in Signaling since 1872*
CONTROL • COMMUNICATION • PROTECTION
Edwards Company, Inc., Norwalk, Conn.
(In Canada, Edwards of Canada, Ltd, Owen Sound, Ontario)



ALCOA ALUMINUM RIGID CONDUIT

here's why:

EASY TO HANDLE, lift, load, carry, erect . . . weighs only ⅓ the weight of conventional rigid conduit

EASY TO CUT, BEND, THREAD . . . no special tools required

EASY WIREPULLING, smooth interior finish plus factory-applied lubrication

LOWER INSTALLED COST . . . this has been proved . . . is being proved time and again by cost- and quality-conscious contractors everywhere

LONGER LIFE, LESS MAINTENANCE . . . Alcoa® Conduit is corrosion resistant through and through . . . long-lasting, good appearance

means more profits for you...
more savings for your customers

EASY TO SELL . . . distributors everywhere are finding new Alcoa Conduit their biggest boost in conduit sales and customer satisfaction. If you are not already handling this profit-making line, ask your nearby Alcoa sales office about our Alcoa Conduit Distributor plan. Aluminum Company of America, 2146-M Alcoa Building, Pittsburgh 19, Pa.

ALCOA
ROME CABLE
DIVISION

For exciting drama watch "Alcoa Presents" every Tuesday, ABC-TV, and the Emmy Award winning "Alcoa Theatre" alternate Mondays, NBC-TV

ALCOA CONDUIT IS SOLD EXCLUSIVELY THROUGH DISTRIBUTORS AND ELECTRICAL WHOLESALERS

Strikes Dent Fourth Quarter Sales . . .

A round-up survey of the nation's electrical distributors reveals that strikes in the copper and steel industries caused only a slight dent in fourth quarter sales.

"WHAT EFFECT has the steel strike had on your fourth quarter sales?" This was the question EW asked many of the nation's electrical wholesale distributors in a recent survey, and the general reply from those distributors contacted was —**"no serious effect."**

The reason why distributors fared well through the strike-ridden fourth quarter of 1959 is probably best explained by one distributor in the Midwest who said, "we were ready for it." Apparently, not only were distributors well prepared for a steel setback, but many also were ready for a nationwide copper strike that tied up 80% of the nation's copper industry during the final months of 1959.

• **High Inventories**—High inventories —rationing—and trading were factors that enabled many electrical wholesalers to meet the demands of customer orders.

With a worried eye towards sales for the first quarter of 1960, here is what electrical wholesale distributors throughout the United States had to say about '59 fourth quarter sales and the effect of the steel strike:

FAR WEST:—"Its effect on construction is in turn affecting us somewhat."—**Phoenix, Ariz.**

"No effect—we have conservative stocks of steel products—but it will be felt in first quarter sales—has had good affect of firming."—**Eugene, Ore.**

"Sales off approximately 15% from 3rd quarter but above 1958 4th quarter."—**Bell, Calif.**

"4th quarter sales holding up well. In large part due to advance heavy inventory purchases in contemplation of steel and copper strikes."—**San Diego, Calif.**

"Our sales will be approximately 5% over the 4th quarter for 1958. Fortunately, we had a good supply of conduit and EMT and have not felt the pinch to date."—**Spokane, Wash.**

"None—if anything, contributes to better 4th quarter sales due to protective buying by our customers."—**Boise, Idaho.**

In the Mid-West the steel crisis had about the same effect on distributor's fourth quarter sales.

MID-WEST: "Sales are down 10%."—**Canton, Ohio.**

"Not much adverse effect thus far. Deliveries to us have slowed slightly, causing us to have more or less a delay in filling our order complete."—**Cedar Rapids, Iowa.**

. . . But Things Look Good For '60

Damaging Philosophy

Most of the public works projects passed the November elections, and these will be good through 1961. This is despite our area being the center of the electric steel industry, and thousands of workers were on strike over election period. I believe general business has held up over the nation's longest steel strike because of the variety of SUB, welfare help, and moratoriums on installment payments—so that the striking worker is not really pinched. The next decade will see even more of this "more pay for less work"; and while it smoothes out the business cycles, it will be most damaging to the attitudes and general philosophy in worker-employer relations.

Behind the Bushels?

With good business, distributors may see the light and increase gross margins.

Coming up Fast

Selective distribution becoming more important.

Three-in-one

(1.) Competition is very tough. Though Cedar Rapids is growing steadily, six is too many electrical distributors for the town. It is hard to maintain a gross margin that will keep us ahead of the steadily rising cost of doing business. Many manufacturers could help the competition situation by cutting down the number of their distributors in any given area. . . .

(2.) Cash discount should be raised to a minimum of 2% by manufacturers using 1% and 1½%, and the discount date should be the 10th prox., with invoices dated 25th to 30th of a month being regarded as dated the first of the following month for discount purposes. . . .

(3.) In the small appliance field, the discount houses and price-cutting department stores are driving out the small independent dealer, the public utilities and the legitimate distributor. If manufacturers want to preserve their nationwide independent distribution sales outlets, which, together with the merchandising utility, in most cases built the manufacturers to the volume they have, they will have to take definite steps to control the number and type of their distributors, and through the distributors, the dealers.

First in His Field

. . . Regarding policies; more manufacturers should think about the distributor the way certain ones do. A manufacturer cannot perform the distributors' functions honestly and still be a manufacturer. The distributor is on the ground floor as far as his own territory is concerned. Taking care of returns, credits, defective merchandise, etc., are a part of his everyday operations.

'60 Good; '61 "Real Good"

I believe 1960 will continue to show a gain because of more capital improvements by heavy industry in our area and increased activity by utilities. 1961 should be real good.

"Rough, But No Worse"

We are determined to have a better gross and net for 1960. Competition will be rough, but no worse than the last three or four years.

Up—Sharply

Present backlog indicates first quarter will be 20% above last year.

"No deterring effect. Construction has not been stopped. Local steel plants have been operating at full production. Our inventory being maintained at high level."—**St. Louis, Mo.**

"We find that in general business is down about 15% but look forward to a rapid comeback."—**Chicago, Ill.**

"Detroit area auto plants shut down. Puts serious hole in local market."—**Detroit, Mich.**

"So far we are ahead of the 4th quarter of 1958. I do believe we have been hurt to a degree, and some conduit and safety switch business."—**Fargo, N.D.**

Deep in the heart of Dixie, distributors also reported only a slight effect from the longest steel strike in the nation's history.

SOUTH: "We feel the steel strike has cut our 4th quarter sales 10% to 20%—due to slow down of construction."—**Alexandria, La.**

"Very little thus far. We had good stocks of conduit and boxes."—**Atlanta, Ga.**

"Our fourth quarter is running well ahead of last year . . . we are feeling shortages on certain steel products."—**Dallas, Texas.**

"Very small effect."—**St. Petersburg, Fla.** "Practically none."—**Charleston, S.C.** "Just a bit."—**Huntington, W. Va.**

"Very little effect so far. First quarter of 1960 is what we fear."—**Gastonia, N.C.**

According to reports from the northeastern section of the nation, distributors fared much better in the 4th quarter than their contemporaries throughout the rest of the nation.

NORTHEAST: "Our total sales so far in the 4th quarter are up 10% over last year but stock of conduit and boxes are getting low."—**Schenectady, N.Y.**

"Some appliances in short supply stock still good on conduit and fittings due to heavy pre strike buying. No loss in sales to date."—**Jackson, Mass.**

"No effect as yet, except conduit."—**Philadelphia, Pa.** "Not at all."—**Jersey City, N.J.**

"4th quarter will be down about 10% due to lack of shipments in early part."—**New York, N.Y.**

"Keeping sales from running over last year—injury is not too great aside from increased purchasing time on steel items."—**Hackensack, N.J.**

"Helped up 'til now. At present, inventory very low on some items. Cannot replace quickly." — **Albany, N.Y.**

"Slowing down on our industrial customers. Ordering delayed."—**Pawtucket, R.I.**

"Very little—a few items in short supply."—**Worcester, Mass.**

One Connecticut distributor sums up the sales situation for the Northeast as follows:

The steel strike is definitely affecting the last two months of this year and probably will affect the first few months of next year. The effect is not so much from our inability to get material, but that of our industrial customers to get steel for their product. When a plant is running part time or totally closed down, they are not making plans."—**Hartford, Conn.**

* * *

Here are more opinions on what lies ahead in the next year . . .

Concentrated, Coordinated, Closer

We expect to increase our gross margins through concentrated and coordinated efforts to obtain more profit per order—by training everyone in the organization to be more profit-conscious.

More manufacturers have been revising their policies to become closer to their distributors and distributor operations and problems, usually by moving toward selective distribution.

Several Needs

From all indications, the steel strike excepted, 1960 appears to be a banner year for sales. We all need to realize that we cannot justify our continuing existence in business without earning a fair and just rate of return on our investment. This also needs to be brought home to our manufacturers and our customers. We need to quit operating in the vicious circle of price-cutting. Also, we need to investigate and take immediate action in curbing continually rising overhead and operating costs. I believe that we will hear more about selective distribution. Personally, a move in that direction, I believe, would be good for our industry.

Healthy Demand

I feel that the good manufacturers will demand more from their distributors in 1960. This will help the industry in profit and sales.

Guarded Optimism

We down here in the Carolinas are full of trends—close margins, manufacturer's policies, competition, and everything you mentioned; but we are of the opinion that 1960 should be a good year. There are many avenues of sales approach that have never been opened. Close margins will continue to be downward, operating overhead up, competition keener, and we don't anticipate any miracles when it comes to manufacturers' policies. The fact remains, however, that it will pay the distributor in the long run to select top-flight manufacturers, team up with them, encourage their support, stock their products, invest your money in them to recognize you as a legitimate outlet, and do the job together.

Time erases many problems and distributors too, so after all it's up to the true distributor to assume the responsibility as a live, wide-awake organization serving the great electrical industry. If there is anything wrong with the electrical distributor and the industry, it is that the distributor fails to recognize the changes, and then time will not permit doing everything that we should as our contribution to the industry. . . .

Nix on Small Profit Orders

We are making every effort to increase profits on direct shipments. We are refusing to take small profit orders, and this has already shown an improvement.

Rosy Glow—Now

The trend for '60 is very promising—with more effort such as has been started in '59, we believe both gross and net will improve.

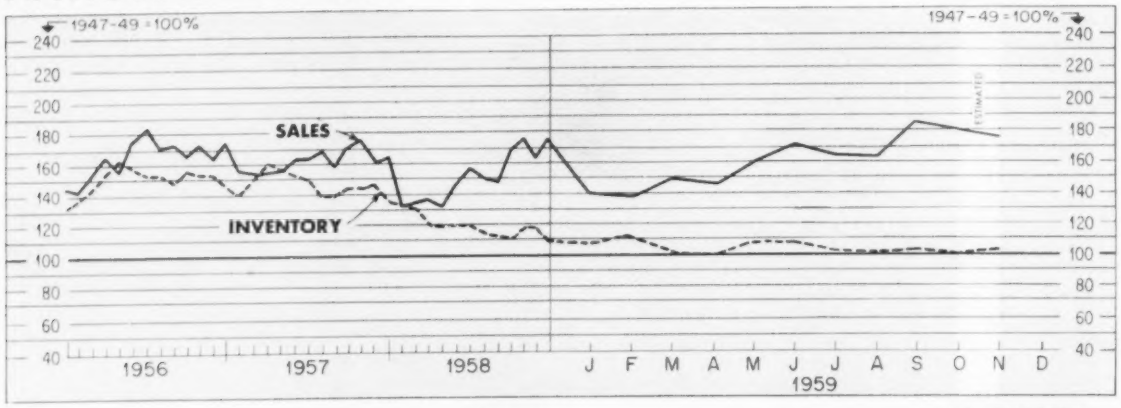
Everything looks good.

Slowdown in the Cards

Can't see continuation of present pace in new home construction which contributed so much to a good year in 1959.

BUSINESS INDEX for October 1959*

NATIONAL PICTURE:

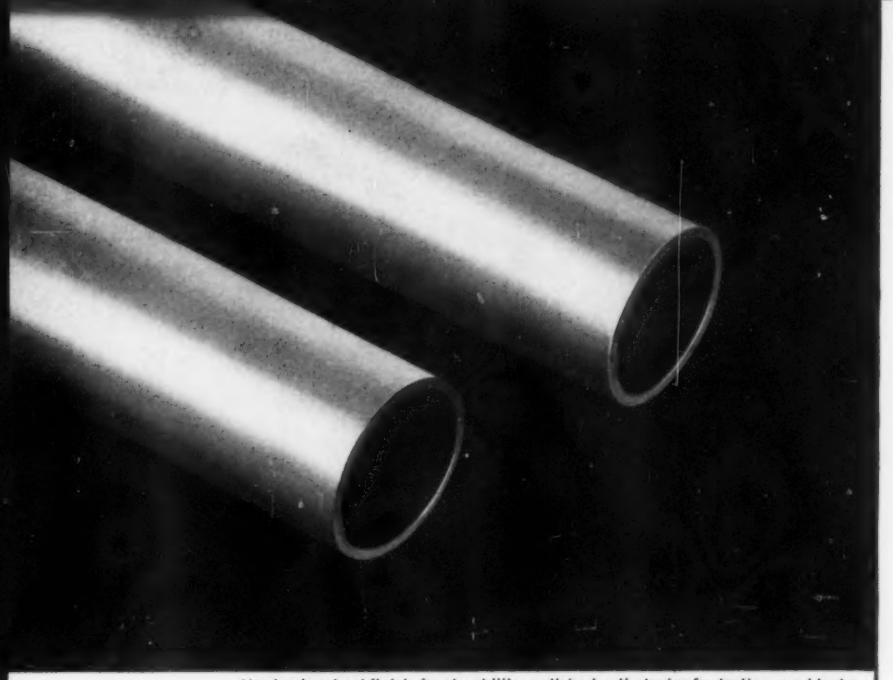


	INDEX					% CHANGE	
	Oct. '59	*Sept. '59*	*Oct. '58*	*Oct. '57*	*Oct. '56*	*Oct. '55*	*1959 fm. 1958***
Sales	180	185	171	177	172	149	+10
Inventory	100	102	118	146	154	148	—

REGIONAL PICTURE:

	SALES (% Change)			INVENTORY (% Change)	
	From Oct. '58	*From Sept. '59*	*1959 from 1958*	*From Oct. '58*	*From Sept. '59*
NEW ENGLAND	+15	— 5	+10	+ 7	+12
MIDDLE ATLANTIC	+ 6	+ 5	+ 5	— 1	0
EAST NORTH CENTRAL	+15	+ 2	+12	— 6	0
WEST NORTH CENTRAL	+11	— 7	+ 7	— 4	+ 6
SOUTH ATLANTIC	+ 1	— 3	+ 6	+ 1	— 7
EAST SOUTH CENTRAL	0	—18	+16	0	+ 4
WEST SOUTH CENTRAL	+12	—11	+ 7	+ 8	+ 2
MOUNTAIN	+15	—20	+18	+30	+12
PACIFIC	+14	— 3	+17	+12	0

*For electrical apparatus, supplies distributors; Source: Bureau of Census. **10 months 1959 from 10 months 1958.



Hard galvanized finish for durability; polished satin lustre for lasting good looks.

Even EMT can look good ...if it's CIRTUBE* EMT

TRUE, the first things you look for in EMT are: one, is it easy to work with—two, is it made to give lasting protection. CIRTUBE EMT, by the way, rates tops on both. But there's no reason why EMT can't *look* good as well!

That's where CIRTUBE EMT "shines," too. Reason for its pleasing polished satin lustre is the cyanide zinc plating process Circle uses (even though it costs a little more to apply than other methods).

The zinc bond is better, too—won't chip or flake off. That's because Circle employs elaborate cleaning processes to make sure that the steel is absolutely clean before plating.

Quality finish is only one of many reasons why CIRTUBE EMT has gained such wide acceptance in so short a time. Order it now from your local Circle representative—or write direct.

*Trade Mark

CIRCLE WIRE & CABLE
a subsidiary of
CERRO DE PASCO CORPORATION

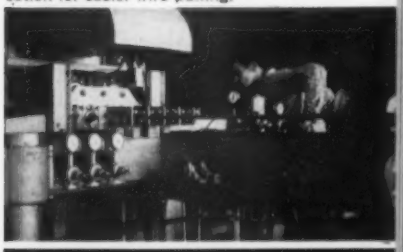
PLANTS: Maspeth and Hicksville, N. Y. **SALES OFFICES & WAREHOUSES:** In all principal cities

RUBBER COVERED WIRES & CABLES • VARNISHED CAMBRIC CABLES • PLASTIC INSULATED CABLES
NEOPRENE SHEATHED CABLES • "CIRTUBE" EMT

CIRTUBE EMT *Ask for it!*

Proper steel plus! The best cold rolled steel plus the right handling give CIRTUBE EMT its natural bendability.

Easy fishing! A baked-on protective coating gives CIRTUBE EMT a built in lubrication for easier wire pulling.



Split-free, bead-free! Induction welded CIRTUBE EMT, left, proves stronger than ordinary EMT, provides easier fishing.

Automated quality control! Automatic controls assure complete and continuing uniform quality of product.

Tight, easily handled bundles! Bright, orange tapes hold CIRTUBE EMT securely for easy handling on and off the job.

Fast, friendly service! Well-known Circle service through a nation-wide network of well stocked nearby warehouses.

WIRE CONNECTORS

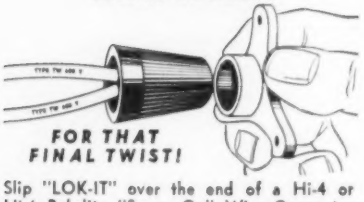
BAKELITE • SET-SCREW • PORCELAIN
A TYPE AND SIZE FOR EVERY JOB!

Hi-4 & Hi-6 BAKELITE WIRE CONNECTORS NOW UL LISTED FOR 600 VOLT USE
1000 VOLTS IN SIGN OR FIXTURE
COMPLY WITH NATL. ELEC. CODE

AND THAT'S NOT ALL—also U.L. listed as pressure cable connectors for general use in all types of branch circuit wiring—conduit, armored cable, non-metallic sheath, open and fixture hanging . . . machine hook-up, appliance repair, etc. MILLIONS IN USE . . . MILLIONS MORE WILL BE SOLD!

ASK FOR FREE SAMPLES

"LOK-IT" PAT. PEND. WIRE CONNECTOR WRENCH
(TWIN SOCKET)



FOR THAT FINAL TWIST!

Slip "LOK-IT" over the end of a Hi-4 or Hi-6 Bakelite "Screw On" Wire Connector and twist . . . LOK-IT does the work! Saves fingers and makes terrifically tight connector joints easily. Thousands of electricians are now using "LOK-IT." Write today for your FREE packets of Wrenches and Connectors.

OTHER "HI" QUALITY PRODUCTS

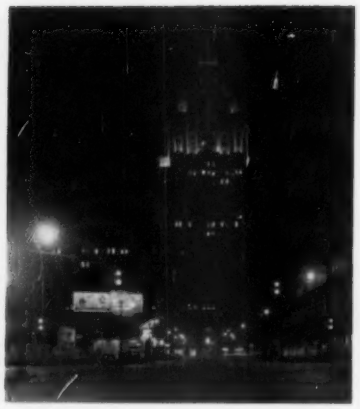
- Plastic Screw Anchors and Kits
- Tape-Mate Winder
- Fish Tape Reels
- Conduit "Snap-Straps"
- Conduit "Drive-Straps"
- Lead Anchors & Toggle Bolts

AND MANY MORE!

MAIL TODAY FOR NEW "Hi" CATALOG

NAME_____
FIRM_____
STREET_____
CITY_____ STATE_____

HOLUB INDUSTRIES, Inc.
450 ELM ST. • SYCAMORE, ILL.



OLD VIEW of south side of Fisher Building tower in Detroit (as it appeared in September '59 issue of EW) shows effect achieved by outdated lighting.

NEW VIEW of tower shows three-dimensional effect attained with floodlights using both plain and diffusing lenses. Illumination totals 30,500-w shown here.

Teamwork Is the Difference

TEAMWORK is the answer to many a distributor's problem when it comes to selling lighting. In the September '59 issue of ELECTRICAL WHOLESALING an example of electrical industry team effort was demonstrated in the project of floodlighting Detroit's Fisher Building tower, which called for the cooperation of—the distributor, Cadillac Electric Supply Co.,—the manufacturer, Crouse-Hinds Co.,—and the utility, Detroit Edison Co.

• **Job Complete**—The lighting of the Fisher Building tower has been completed, and if you enter Detroit at night over the Ambassador Bridge, you can see the 28-story edifice brightly silhouetted against the Detroit skyline. In order to achieve the aesthetic lighting effect involving the use of 22 1,000-w floodlights with plain lenses, eight 1,000-w units with diffusing lenses and two 250-w lights with plain lenses, it was necessary to balance the brightness and shadows in proper relation to the architectural columns of the structure.

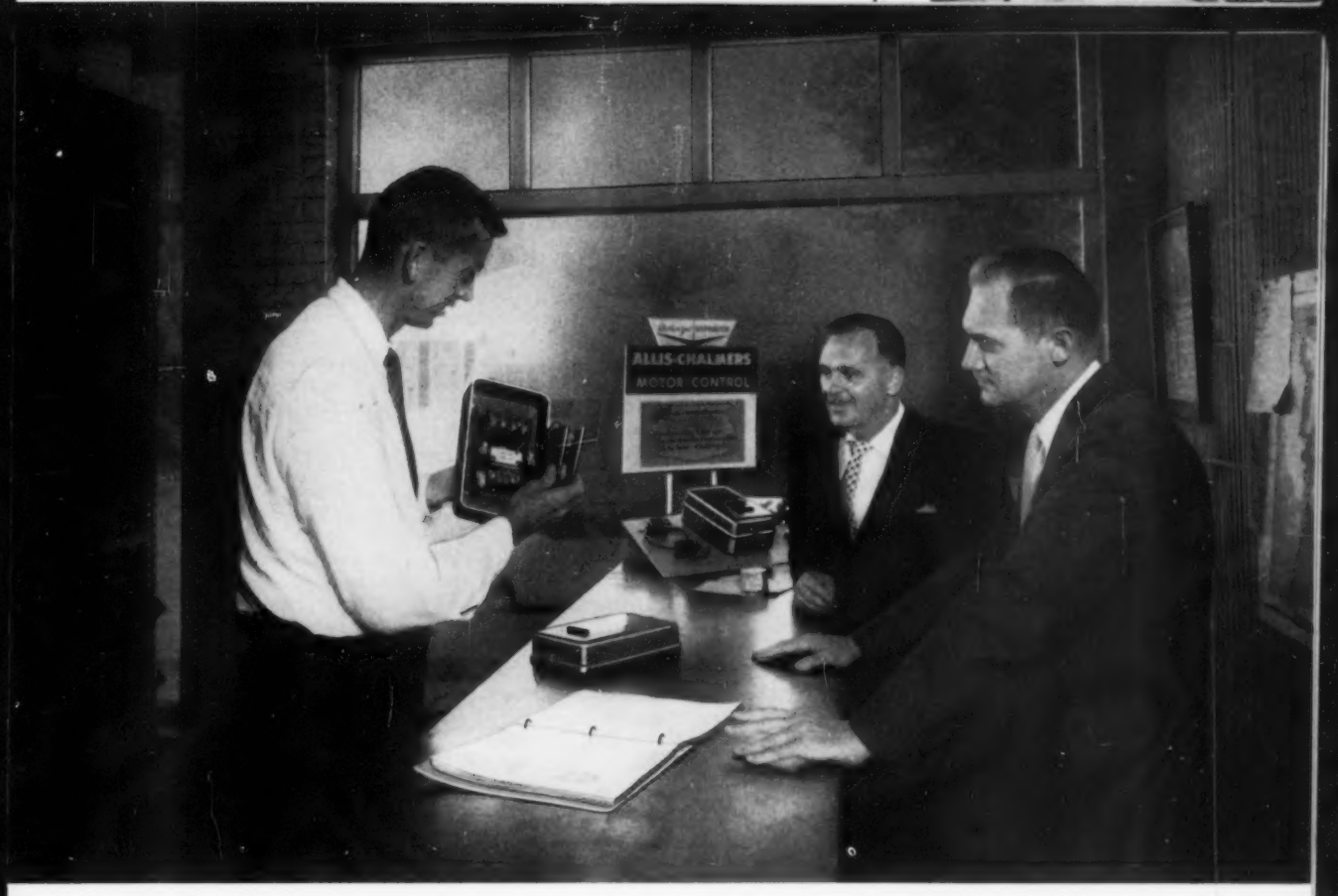
Actually, it took approximately four hours on the job to adjust the flood lighting on the tower. The Detroit Edison Company furnished mobile communication equipment and an engineer to operate it. The task of aiming the lights called for the assistance of Harry Simonton of Cadillac Electric, Dick Scott of Crouse-Hinds, and George Poland and Jim Finn of Detroit Edison. Bernard Lindemann, chief engineer of the Fisher Building was also a member of the troupe.

• **Aiming** — An aiming point was taken up approximately two and one-half blocks away from the Fisher Building, which proved to be the best location for accurate aiming of the lighting equipment. According to the team on the scene, the difficulties involved necessitated changes in adjustment of the lighting equipment from the prescribed aiming angles given by the manufacturer for the equipment.

The aiming of the floodlights called for remote control operation. Electrician Lew Currie, at the microphone at the aiming point gave directions to Fisher Building electricians who adjusted the lamps according to observers' directions approximately two and one-half blocks away.

Prior to the aiming operation, an orientation meeting was held in the lobby of the Fisher building where instructions were given to the ground crew and the electricians who were responsible for adjusting the equipment during the aiming of the floodlighting. Due to the concentration necessary for spotting the aiming of the floodlights, it was necessary to alternate between Dick Scott of Crouse-Hinds and Jim Finn of Detroit Edison.

• **Facade Challenge** — Due to the protruding columns and fluted architecture with canopy windows, a real challenge was provided to all observers in balancing the brightness on the building facade. According to Finn, the problem was to secure light and shadow to emphasize the three-dimensional effect of the tower. "We wanted to avoid a 'flat effect' that so often results from floodlighting systems not properly integrated into the architectural design of the building," Finn said.



New low voltage motor control line adds more sales appeal to Allis-Chalmers franchise

There's powerful sales inducement in this new Size 0 to 4 line, designed to stimulate buyer interest and distributor profits.

Your customers profit from exceptional performance characteristics proved in millions of "life test" operations; versatility to make desired modifications on the job quickly and inexpensively.

You profit from the pulling power of a full line of standard control for industrial and commercial applications. The complete low voltage line includes equipment through Size 9. And that's only part of the picture. The wide range of profit-making industrial control includes high voltage equipment, dc control, special devices and control systems.

Fast delivery from field and factory stocks keeps your inventory requirements low.

Profitable opportunities are still open. For information call your nearby A-C district office, or write Allis-Chalmers, Distributor Sales Section, Milwaukee 1, Wis.

OTHER A-C SELLING SUPPORTS:

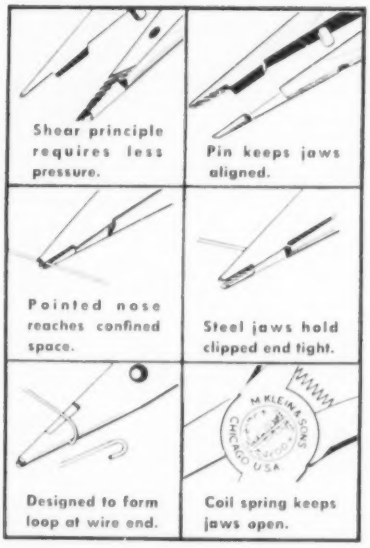
- National advertising and sales promotion with impact for distributors.
- Selective appointment policy.
- Liberal exchange policy on stock products.
- Direct aid in specialized sales and engineering applications.
- Sales producing product meetings in the field and at the factory for your salesmen.
- Continuous research and development to provide new products that stay ahead.
- Diversified line of electrical equipment from one supplier — motors, transformers, regulators, unit substations, switchgear and circuit breakers.

ALLIS-CHALMERS A-C

A-1184

No. 208-6PC Long Nose Shear Cutting Plier
Patent No. 2,848,724

JUST THE PLIER FOR ELECTRONIC USE


Shear principle requires less pressure.
Pin keeps jaws aligned.
Pointed nose reaches confined space.
Steel jaws hold clipped end tight.
Designed to form loop at wire end.
Coil spring keeps jaws open.

Here is a plier specially designed for electronic use. It will fit into confined space and steel jaws hold clipped end of sheared wire firmly . . . nothing to wear out.

The shear blade is at an angle of 15 degrees (the standard angle of regular diagonal pliers). Shear principle assures smooth, continuous action without snap, preventing shock which might damage transistors or delicate components. For use with bare wire up to 18 gauge.

See your electronic supply house or

WRITE FOR CATALOG 103-A

Foreign Distributor: International Standard Electric Corp., New York.

Mathias KLEIN & Sons
Established 1857 Chicago Ill. U.S.A.
7200 McCORMICK ROAD • CHICAGO 45, ILLINOIS

Electric Power: USA v. USSR

Kilowatts, Not Kopecks, Keeps U.S. Power Lead Over U.S.S.R.

The following report is based on the "Evaluation Of The Russian Threat In The Field Of Electric Power," prepared for the Subcommittee on Economic Statistics of the Joint Economic Committee, Congress of the United States, by Edwin Vennard, vice president and managing director, Edison Electric Institute, New York, N.Y.

"**RUSSIAN PRODUCTION of electricity,** an indicator of total national industrial productive capacity, will lag considerably behind that of the United States for at least the foreseeable future," reports Edwin Vennard, vice president and managing director of the Edison Electric Institute, in his report following his return from a tour of Soviet electric power facilities with a group of U.S. electric power experts. The group represented the electric utility industry and the manufacturers of electrical equipment.

• **Follow The Leader** — Vennard stated that at the end of 1958 Russian power capacity was 53,100,000 kilowatts while the United States had 160,219,000 kilowatts. The Russian goal for 1965, he said, is 108,000,000 kilowatts, while in that year the United States should have 245,000,000 kilowatts.

Main Power Systems

There are 52 power systems in all of the U.S.S.R., according to the latest report. Many of these are individual plants, not interconnected with any power grid. Within European Russia the three principal, interconnected systems are the Central (including the Moscow, Yaroslav, Ivanova, and Gorky Systems), the Urals (including the Molotov, Sverdlovsk and Chelyabinsk Systems) and the Southern (including the Dnieper, Donets and Rostov Systems). Each of these main systems reportedly has a capacity of six or seven million kilowatts. At some indeterminate time in the future, these three systems are to be linked with other systems in European Russia and the six systems in Central Siberia to form a single power grid.

• **Energy Resources** — The Soviet Union has an abundance of coal for fuel. It has been estimated that energy resources in the Soviet Union in comparison with the U.S. are as follows:

	USSR	US
Coal Reserves, billion short tons	1,763	1,895
Crude Petroleum Reserves, billion bbl	24	30.5
Proven Gas Reserves, trillion CF	706	254
Potential Water Power, mean flow, million hp	375	116

Russia, it is learned, places great emphasis upon the building of the industrial plant or the machinery of production. As a consequence, about 80% of the total production of electricity is for industrial purposes. The remaining 20% is used by commercial establishments, the homes and the farms.

Forecasts

• **Construction Plans**—Russian propaganda circles report that that nation plans to install 60 million additional kilowatts by the end of 1965, which would bring the USSR total capacity to something over 108 million kilowatts.

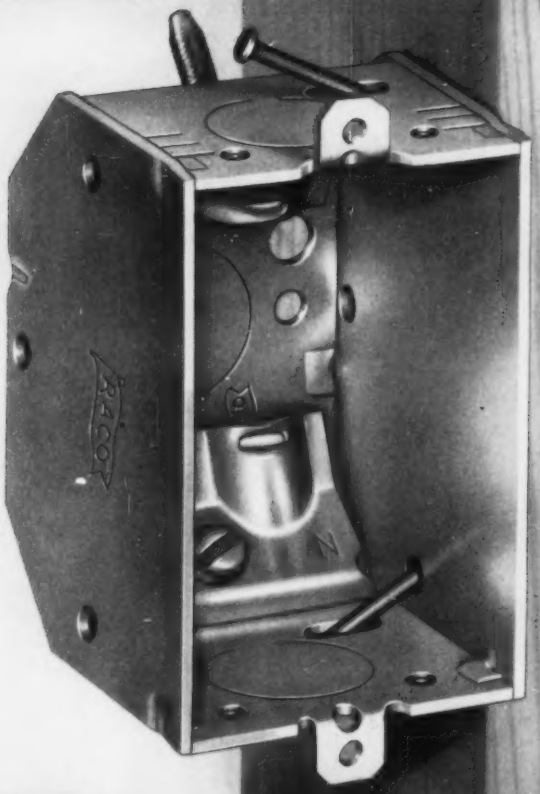
By comparison, we have under construction in America 51 million kilowatts of new capacity for the four years ending 1961. The new capacity we will have installed from 1958-1961 is slightly greater than Russia's present total.

The USSR and The Future

It is understandable, according to Vennard, that the various Ministers who plan for the Soviet economy can determine the size of the total industrial plant for any given time in the future and design a plan to reach that goal. Supplying the electric power to fit in with such a plan is not an insurmountable problem. It is fairly simple to state that the light metals industry, for example, will require a certain number of kilowatts, and then to plan for the construction of those kilowatts according to a time schedule.

However, bringing about an increase in the non-industrial use of electricity is more difficult. For example, the average home use of electricity in Russia is about 400 kilowatt-hours per year, as compared with an average of about 3400 kilowatt-hours per home in the U.S. in 1958. The use of electricity in the home depends to some

THIS AD IS APPEARING IN MAGAZINES GOING TO MORE THAN 20,000 ELECTRICAL CONTRACTORS.



New RACO WELDED SWITCH BOXES

...big cost savings...easier to install

New RACO welded switch boxes offer you these important advantages:

—big cost savings per box

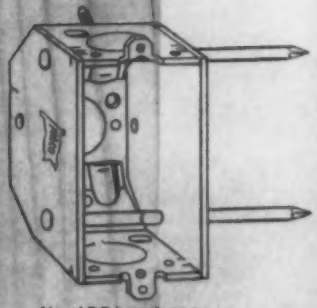
—greater strength because box is *projection welded*

—three sets of "straight-through" nail holes for faster mounting

—new knockout slots at each end for easy angle-nailing in tight areas

—flat sides for quicker, smoother installation

Your RACO Distributor has the new welded non-gangable, beveled corner switch boxes with or without staked nails, with or without ears. Try them now for greater savings, easier installation.



No. 495 bevel-corner box has staked nails for faster, easier installation

No. 482 is available with two screw plaster ears

RACO **ALL-STEEL EQUIPMENT INC.**
AURORA, ILLINOIS

TRADE ARRO MARK

MACHINE SCREW ANCHORS

Easy to install . . . requires shallow hole . . . fixture can be removed and replaced without loosening anchor . . . a few hammer blows set anchor firmly . . . conical-shape nut expands lead sleeve to provide strong holding power . . . widely used by electricians, plumbers, carpenters, ornamental iron workers, maintenance men, awning and sign men and other tradesmen.

Cutaway drawings show how setting tool expands lead sleeve around conical nut.

HAMMERLESS SETTING TOOL

Expander hammerless setting tool for easy installation of Arro Machine Screw Anchors in hollow tile, bottomless or weak-bottom holes.

THE TRADE ARRO MARK LINE OF MASONRY ANCHORING AND DRILLING DEVICES

DISTRIBUTORS

This Advertisement Appears in Leading Publications Directed to Your Customers

ARRO EXPANSION BOLT COMPANY

DEPARTMENT B, P. O. BOX 388, MARION, OHIO

extent upon the purchasing power of the people—the purchasing power to buy appliances as well as electricity. In some respects the use of electricity in the home reflects the well-being of the people in the home. It is a good indication of the standard of living There is a definite correlation between the purchasing power of people and the use of residential electricity.

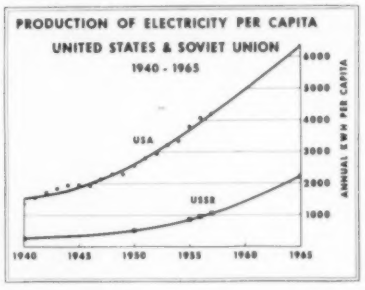
According to the U.S. Electric Power experts touring the Soviet facilities, they were told that Russia plans to continue to emphasize the building of the machinery of production. They reportedly heard of no plans for the promotion of the increased use of electricity for commercial establishments, for the home, or for the farm.

• **1965 Goal Likely** — Knowing of Russia's technical and scientific ability, it would be safe to assume that she is capable of reaching a total of 108 million kilowatts in power capacity by 1965.

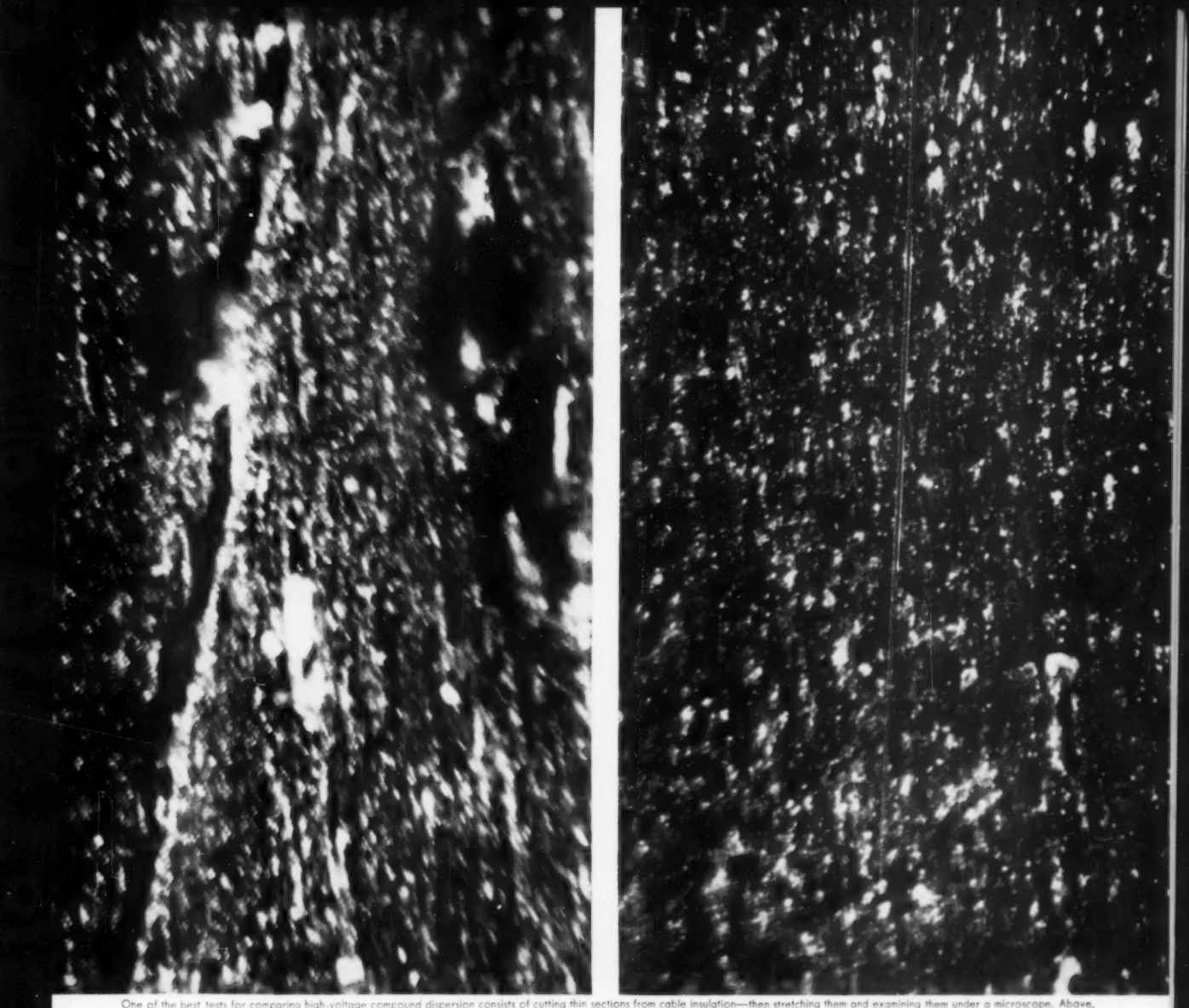
Electric Rates

According to Vennard, the U.S. representatives did not obtain the prices of electricity to industry. They were told reportedly that the price covers the cost of making the power plus some margin. Since the government owns the power facilities and the industry, the price is not of much significance.

The price of residential electricity is a flat 40 kopecks per kilowatt-hour. At 10 rubles per dollar, this is equivalent to four cents a kilowatt-hour for all use. In America we follow the practice of providing a sliding scale rate for all use of electricity. For residential service this may start in the neighborhood of 4 to 6 cents a kilowatt-hour and scale on down to 1½ cents to 2 cents a kilowatt-hour. The average price of all residential electricity in the U.S. is about 2.53 cents a kilowatt-hour.



In the field of electric power it appears that Russian production will be considerably behind that of America for at least as far as we can foresee in the future. This in some respects is a measure of the total industrial capacity of the two countries.



One of the best tests for comparing high-voltage compound dispersion consists of cutting thin sections from cable insulation—then stretching them and examining them under a microscope. Above, you see magnified sections of ordinary cable insulation (left) and Anaconda Butyl (AB) insulation (right). Note the even grain structure, the better dispersion of the Anaconda Butyl (AB) Cable.

IT TAKES A MICROSCOPE TO TELL THE DIFFERENCE BUT THE DIFFERENCE IS CRUCIAL

Even butyl—the most effective rubber insulating material ever developed for high-voltage cable—requires additives to bring out all its superb insulating properties. These additives are usually in the form of finely divided powders which are extremely difficult to disperse uniformly in the raw butyl.

The microscope helps show you that conventional mixing (upper left micrograph) produces poor uniformity, leaves many additive particles undispersed. Actual service proves these flaws drastically shorten your high-voltage cable life.

That's why Anaconda developed an entirely new mixing process. In fact, built a new plant for just one product—Anaconda Butyl (AB) Cable. The micrograph on the right helps show you one result—uniform, better dispersed insulation. And actual service proves this means long trouble-free cable life.

For real long-range economy, promote Anaconda Butyl (AB) Cable to help protect your customers' investment in high-voltage cable. Send for Publication DM 5903: High-Voltage Durasheath* Cable to Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

*Reg. U.S. Pat. Off. 5925W

ASK THE MAN FROM

ANACONDA®

ABOUT BUTYL (AB) HIGH-VOLTAGE CABLE

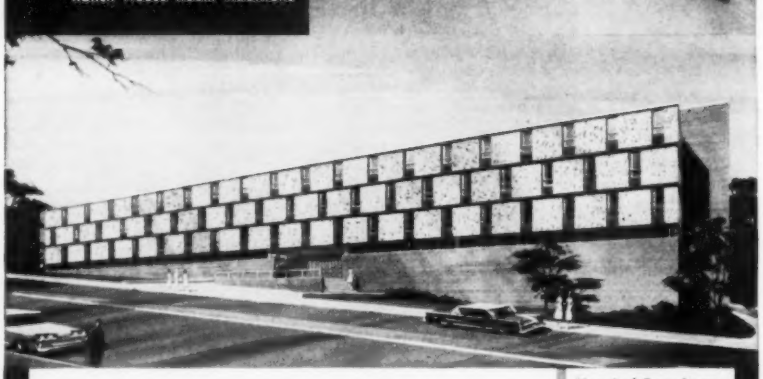
ALL OVER THE U.S.

. . . now heating many types of buildings

- Ranch Homes
- Split Level Homes
- Two-Story Homes
- Apartment Buildings
- Room Additions
- Offices
- Institutions
- Motels

Sun-Tron ELECTRIC HEAT

Ranch House Room Additions



Design of Distinction

Radiant Wall and Baseboard Panels with "A Size for Every Room". Available in 6 convenient sizes: 48x6, 30x9, 36x9, 36x14, 72x9, 36x18. Your choice of: oak, mahogany-walnut, beige-tone, pearlized grey finishes.

• Distinctive Styling • Greater Efficiency • More Durable Construction • Most Convenient Utilization • Simplicity of Installation • Ultimate in Comfort.

Write for analysis booklet of operation and installation costs for a Sun-Tron electrically heated home in your own area. With this as a guide, it is possible to estimate most typical homes.

Hospital Dormitory for Nurses (under construction)

APPLICATION ENGINEERING AVAILABLE

To assist builders, electrical contractors and others in incorporating Sun-Tron Electric Heat into their buildings, Sun Tron maintains an application engineering department. Submit detailed construction specifications, floor plans and elevations for estimate and proposal.

Sun-Tron CORPORATION 7435 W. WILSON AVE., CHICAGO 31, ILLINOIS

NEMA

KEEP PACE ELECTRICALLY

SYMBOL of National Wiring Bureau's "Keep Pace Electrically" program is shown above.

"Keep Pace Electrically" Program Launched

NEW YORK — A new overall theme and emblem — **"Keep Pace Electrically"** — designed to promote and sell electrical equipment in the commercial market has been developed by the National Wiring Bureau. The new program is a counterpart to the "Live Better Electrically" program in the residential field.

The new concept was introduced last month by Lester E. Barrett, president of Barrett Electrical Supply Co., St. Louis, Mo., and chairman of the NWB.

Barrett indicated that through the program "more substantial and more rapid progress toward electrifying America can be achieved by manufacturers, contractors, utilities and distributors."

New York To Be Site Of 1960 Electric Living Show

NEW YORK — It's a long, long time from now to September, but not for New Yorkers who are anxiously waiting for New York's first annual electrical living show, "Electra City USA." The show scheduled for September 10-18, will allow visitors to see and use every electrical product on the market, according to a show spokesman.

NEMA To Administer Medallion Home Program

NEW YORK — National responsibility for administration of the Medallion Home Program will be assumed this year by the National Electrical Manufacturers Association, according to Joseph F. Miller, managing director of NEMA.

"... I could see how it would save time in our work... I called our distributor and ordered it."

DIRECT QUOTATION FROM THE FOREMAN OF AN ELECTRICAL CONTRACTING FIRM.

INTERVIEWS REVEAL HOW YOUR SUPPLIERS' ADVERTISEMENTS IN

ELECTRICAL
CONSTRUCTION
AND MAINTENANCE

CREATE SALES FOR YOU!

How do your suppliers' advertisements in Electrical Construction and Maintenance stimulate direct buying action for you, the electrical distributor? In continuing readership studies conducted by the magazine, subscribers are asked, among other things, how they respond to the advertising. The quotations here are typical of hundreds of such statements illustrating how those ads create interest – and action – among your customers and prospects!

TESTERS

"This has a good view of the work being done and I could see it would save us time in our work. It was a good picture . . . he has a good testing device for use in the field. Small but efficient. I called our distributor and ordered it. We have it and are using it. I am very happy with it."

FOREMAN,
Electrical Contracting Firm

TOOLS

"This ad features and describes many items I am interested in. There are many miscellaneous and varied items in the ad that help with minor problems found in electrical construction. I always look at these ads to keep up to date. I've already bought a couple of these tools. After seeing them in the ad I found out the price from the distributor and ordered them."

ESTIMATOR,
Electrical Construction Company

CABLE CLAMPS

"The minute I saw the words, 'can save hours,' I took another look. Anything that can save even five or ten minutes, is worth a lot to me. We're always fighting time. The idea of a clamp instead of plates and screws is a distinct advantage . . . I sure will take action. I'm going over this with the president and then we'll probably contact our local supplier for one to see how it works. If it's all it says, I'll order them for our many jobs."

MANAGER, *Industrial Wiring Contractor*

GLASS ELECTRIC RADIANT HEATING

"In this area we are just starting to work with electric heating. I like to be ahead and the ad aroused my curiosity to see if it contained anything new. I can get additional information about this product from the local supply house where the units are there to see. I happen to have sold a couple of these units to customers this past summer for use in summer cottages by showing them the display at the supply house."

OWNER, *Electrical Contractor*

FITTINGS

"I use their fittings. I try to follow them up because they haye fittings that are timesavers and easy to install. This is something that I don't have. It would be fine because it protects the insulation as you pull the wire through . . . I intend to ask the distributor if they carry this in stock."

OWNER,
Electrical Contracting Company

MAGNETIC STARTERS

"This ad shows a product using smaller space but with equal control capacity. In our field this is applicable in remote control work of a motor driven apparatus. This will be discussed in my group of electrical designers. We will see if it would be useful in future specifications and then we'd submit specifications or direct orders to a supplier . . ."

DESIGN ENGINEER,
Power Plant Design and Construction Co.

TOOLS

"I'm interested in tools. I was looking for new products. I found this bit and power extension. It should help in speeding up production and the cost should be lower . . . I asked my distributor to bring some in and I would try them out . . ."

OWNER, *Electrical Contractor*

ALUMINUM CONDUIT

"They show layouts and offsets and bends in pipe that's made of aluminum. I've been discussing it and I find it's available in our electrical distributing houses and I think I'll use some of it. I'm trying to talk an aircraft company for which I do a lot of work into letting me use it."

OWNER,
Electrical Contractor

YOUR SUPPLIERS' ADVERTISING IN . . .

1. HELPS YOU FIGHT PRICE PRESSURE

Advertising establishes in the minds of buyers the importance and desirability of specific features designed into the product. It emphasizes economies of installation, operation and maintenance which outweigh the original cost consideration.

2. CREATES PREFERENCE FOR LINES YOU HANDLE

In a choice between products of comparable value and performance, a stronger familiarity with one product name, and the company making the product, can have decisive influence. A basic function of advertising is to help create such brand preference.

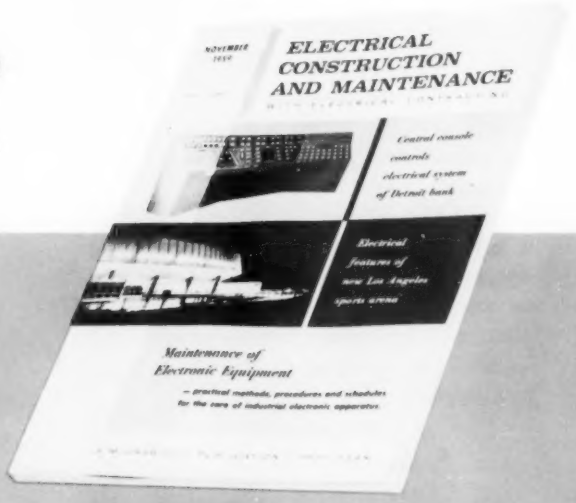
3. MAKES IT EASIER FOR YOU TO SELL

Advertising alerts your customers and prospects to new product developments which will help them operate more efficiently and economically. It contributes vitally to the continuing job of product education concerning the lines you handle.

4. HELPS REDUCE YOUR SELLING COSTS

By relieving your salesmen of a major part of the educational chore, advertising allows those salesmen to make most profitable use of their time, bearing down on the functions of negotiating and closing orders. Between sales calls it helps keep your customers sold!

YOUR BEST CUSTOMERS AND PROSPECTS PAY TO READ . . .


ELECTRICAL CONSTRUCTION AND MAINTENANCE
Central console controls electrical system of Detroit bank
Electrical features of new Los Angeles sports arena
Maintenance of Electronic Equipment

EVERY MONTH!

More than 41,000 electrical men in all areas of the country subscribe to ELECTRICAL CONSTRUCTION AND MAINTENANCE. They belong to three major groups — all buyers and specifiers of the electrical products you distribute: electrical contractors . . . plant and commercial electrical men . . . consulting electrical engineers. As you well know, the job interests of these three groups overlap:

The electrical contractor is, primarily an *installer* of electrical systems. But he must also know electrical system design and maintenance.

The plant electrical engineer *maintains,* but must also be skilled in design and installation.

The consulting electrical engineer designs, but must be able to handle installation and maintenance problems.

There is only *one* publication that serves the *integrated* job interests of all three groups — only one attracts them as paid subscribers: ELECTRICAL CONSTRUCTION AND MAINTENANCE.

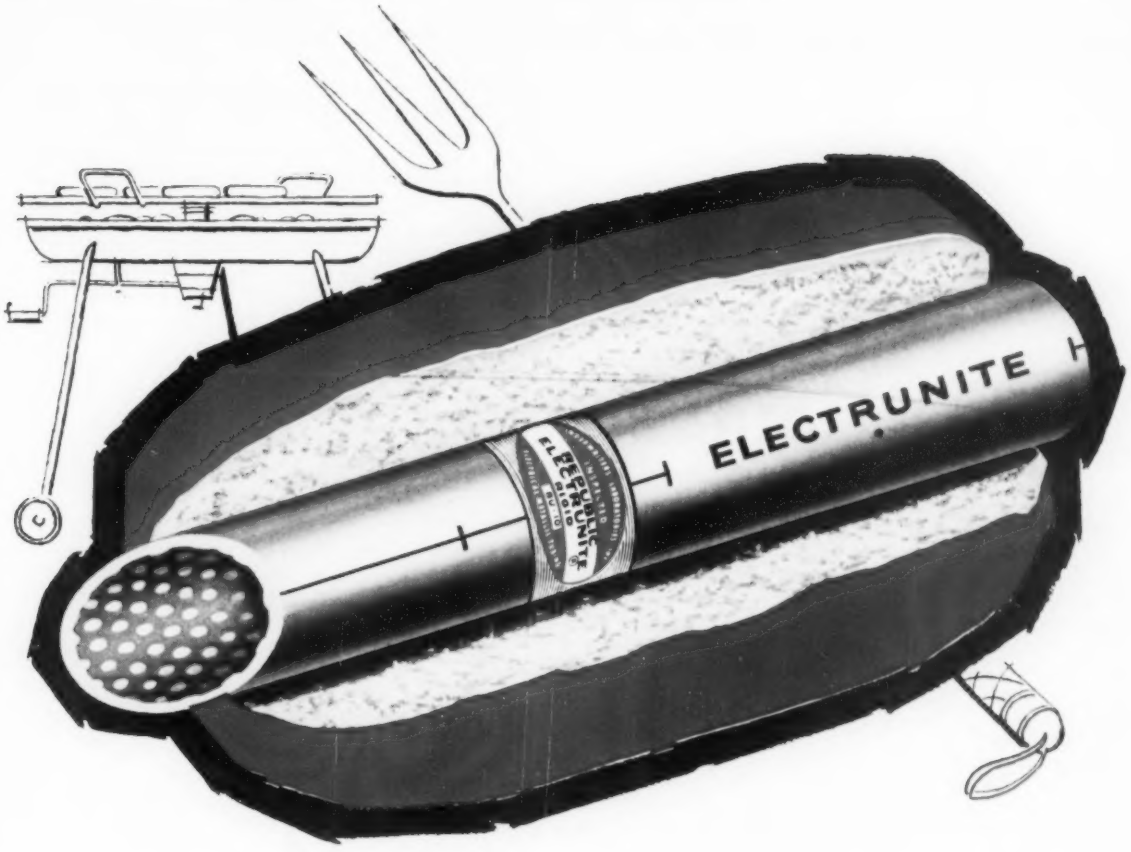
How does it serve those electrical men? With advanced, authoritative technical information on *all* aspects of electrical work: design . . . installation . . . maintenance . . . facts they need to continue performing their jobs efficiently and economically.

To those electrical men, the advertisements in ELECTRICAL CONSTRUCTION AND MAINTENANCE are an extremely valuable source of the *product* information needed to help them select and buy the equipment and supplies used in their work. Through such advertising your suppliers help you, the electrical distributor, create greater sales and profits!

ELECTRICAL CONSTRUCTION AND MAINTENANCE

A McGraw-Hill Publication
330 West 42nd Street, New York 36, N. Y.

ABC ABP



THE BEST COSTS LESS... *to sell!*

Red-Hot and ready Republic ELECTRUNITE® E.M.T. is as popular with electrical contractors as hot-dogs at a cook-out.

Product Promotion... a consistent program of national advertising and sales contacts brings instant customer recognition for this product. "INCH-MARKED"..."GUIDE-LINED"..."Silverslick" are the *"buy*-words" of your customers and prospects. Try them yourself.

Get behind the sales leader. Check the sales advantages of high quality, high profit ELECTRUNITE E.M.T. Call your Republic representative for complete merchandising facts.

SILVERSLICK inside finish makes wire-pulling up to 37% easier. Wire-pushing easier, too. Contractors ask for it!

"INCH-MARKED"®... an exclusive sales feature that teams up with the ELECTRUNITE Bender for easier fabrication and installation. Trade preferred!

"GUIDE-LINED"®... another sales feature for easier bending alignment and better visability. Eliminates "wows". Featured on all popular sizes.

ELECTRUNITE

Another Republic sales aid. The Bending System booklet, available imprinted for your counter to remind journeymen to come back to you.

REPUBLIC STEEL

STEEL AND TUBES DIVISION

REPUBLIC STEEL

Cleveland 8, Ohio

Put technical punch in your selling—take this . . .

20-Hour Electrical Course

Here's a packaged course in electrical self-instruction for the busy distributor salesman who wants to get a really useful technical background in a minimum of spare time. In response to wide demand, we're reprinting the outline and instructions for our 20-Hour Electrical Course, which was presented in the May, 1959 issue. Also, we have extended the deadline for receiving completed exams to May 2, 1960.

ACQUIRING a well-rounded understanding of the technology of the electrical industry demands a planned approach. It should not be left to chance and hearsay, with the idea that mere exposure to the industry and contact with its technicians will gradually develop a useful technical background.

Such an approach will only confuse a salesman and limit him. The kind of knowledge which will make a salesman valuable to his customers is organized, accurate, practical. It can only come from a formal effort at learning.

Most salesmen do not have the time, the inclination or the money to embark on formal schooling in electrical technology. And there are few courses available in trade or extension school which provide a short, practical instruction aimed at the needs of the salesman.

Outside of the industry's own training programs, self-instruction is the only way in which a salesman can initiate and carry forward his own technical development.

To meet the widespread demand for electrical instruction, ELECTRICAL WHOLESALING has had a special 20-hour course prepared for use by any electrical salesman. This course is aimed at building a basic framework of electrical understanding with the minimum possible time and money investment on the part of the salesman.

Consisting of only twenty one-hour sessions of home study, this course "paints the big picture," leaving the many details to be filled in from daily experience.

The Course

ELECTRICAL WHOLESALING's course, carefully designed for logical development of the technical background, is divided into three sections; **Theory, Equipment** and **Systems.**

Each section consists of a number of study sessions of one-hour duration based on use of a given textbook as follows:

THEORY — Text: "Elementary Applied Electricity." This secton investigates the fundamental actions, characteristics and phenomena of electrical devices and circuits.

EQUIPMENT — Text: "Electrical Equipment Manual." This secton translates theory into actual types of equipments used in modern electrical construction and maintenance work.

SYSTEMS—Text: "Electrical Systems Design." The last section correlates the first two sections, setting forth the makeup of actual electrical systems used in all types of buildings.

Three textbooks for the course can be purchased or obtained from a lending library. It is recommended that they be purchased to serve as reference books and also for continued study of material not covered in the course.

For any electrical salesman, these three volumes represent an excellent reference library for year-around use. Total cost of the three books is $14.25, which is the only outlay for the course.

Here Are The Books To Use

For Section I—
"Elementary Applied Electricity" by L. Raymond Smith
Published by McGraw-Hill Book Co.
Price: $3.75

For Section II—
"Electrical Equipment Manual" by McPartland and Novak
Published by Electrical Wholesaling
Price: $4.00

For Section III—
"Electrical Systems Design" by McPartland and Staff of E C & M
Published by McGraw-Hill Book Co.
Price: $6.50

Study Plan

In preparing to take this course, a salesman must make a careful plan of action, based on a firm, serious resolve to carry the course through to completion. Typical considerations should include the following:

a. Time spent on the course must be taken from other pursuits. It must be understood that some sacrifice is involved. Although each session is only an hour, this will mean one less hour for other more entertaining activities.

b. The course must have continuity, i.e., study sessions must follow a fixed schedule from beginning to end of the course. If a fixed rate of progress is not observed, completion of the course will be constantly in jeopardy.

c. Best results will be obtained if the course schedule is set at two or three separate one-hour sessions per week. It is important that no more than three sessions be scheduled for each week. This will provide sufficient time gaps through the course for discussing and solving any puzzling problems which may arise during study sessions.

d. It is best if a definite hour be set

The Course Follows This Plan

SECTION I - Theory (5 sessions)
Voltage sources, current flow, Ohm's Law, reactance, magnetism, single-phase circuits, three-phase circuits.

SECTION II - Equipment (7 sessions)
Lighting equipment, motors, wires and cables, raceways, protective devices, switching devices, transformers, wiring devices, etc.

SECTION III - Systems (8 sessions)
Design and installation of branch circuits, panelboards, feeders, disconnecting means, overcurrent protection, motor circuits, control circuits, signals and communications.

NOTE: Each session lasts one hour.

for study sessions on definite nights, e.g., 8 to 9 o'clock on Monday, Tuesday and Thursday nights. The best nights are those when social engagements are least likely, to assure maximum continuity of course.

e. If possible, arrangement should be made to have consultation with a competent technical person—such as a contractor or engineer friend or sales engineer, if your firm has one.

f. The habit of technical discussion should be developed and technical knowledge should be exercised honestly and diplomatically. Plenty of questions can bring in a lot of knowledge.

g. If desirable, some form of financial incentive can be attached to completion of the course. A deposit of $10-20 with a friend and a stipulation of forfeiture if the course is not completed can really keep the pressure on.

Accompanying tables detail the 20-hour course. From there on, it's up to the individual. Perseverance, of course, is the key to successful completion. And successful completion is the key to technical proficiency.

Remember, though, you only get out of this self-instruction course what you put into it. In a way, you are the teacher and the student.

Program of Study Sessions (one hour each)

Using "Elementary Applied Electricity"—

1. Chapter 1. Read pages 1 to 14 (sections 1 to 22) twice. Digest as much as possible, but do not get hung up on little points. Skip them. They may clear themselves later. Do not go past page 14 until the next study session. Spend any extra time on the given lesson.

2. Chapter 1. Read pages 14 to 20 (sections 23 to 32). Do problems 1, 2, 3, 7, 10 and 15.

3. Chapter 2. Read and study pages 24 to 33. Omit section 41.

4. Chapter 4. Read pages 44 to 52 (through section 68) in first half hour. Read pages 52 to 61 in second half hour. Do not work the problems, just read for maximum comprehension.

5. Chapter 18. Read pages 250 to 268, skipping all problems and spending time only on the text.

Using "Electrical Equipment Manual"—

6. Page 7, Incandescent Lamps. Read and study.

7. Page 13, Fluorescent Lamps.

8. Page 40, A. C. Motors.

9. Page 55, Wires and Cables.

10. Page 67, Raceways.

11. Page 88, Switchboards and Panelboards.

12. Page 134, Wiring Devices.

Using "Electrical Systems Design"—

13. Pages 1 to 9 (down to "Conductors and Ratings"). Read slowly for continuity of understanding. Stay with it if it's rough going. Hash out anything that does not readily come over. Build a good base of understanding in these pages.

14. Pages 9 to 20. Read and study diagrams and tables.

15. Pages 21 to 28.

16. Pages 29 to 41 (up to "Motor Feeders").

17. Pages 41 to 49 (up to "480/277-Volt Systems").

18. Pages 49 to 55. Omit the tables on pages 56 and 57. Then read pages 58 to 61.

19. Pages 74 to 83.

20. Pages 84 to 104. Read fast for general understanding.

Course Certificates

Pictured at left is an award you'll be proud to win and display! It's the 20-Hour Electrical Course certificate already in preparation for mailing to the 26 salesmen-readers who have thus far digested the course, taken the test, and passed with grades above the minimum of 75% correct. It's not too late to take the course and the test and avail yourself of an invaluable technical background while doing so. **Look for the test in the March issue!**

ANOTHER ADVENTURE IN LOW-VOLTAGE WIRING WITH

REMMIE REMCON

and

ALEC TRISHUN

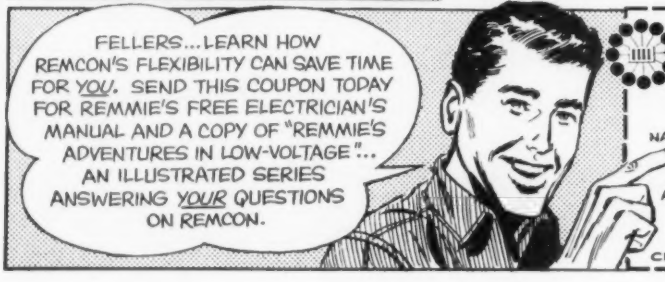
"PILOT-LIGHT PROFITS WITH REMCON!"

I'D LIKE THE POST-LIGHT HERE, PLEASE.
O.K., MA'AM. ALEC, FIRST WE'LL PUT UP THE POST, THEN WE'LL PUT A 4 INCH BOX IN THE BASEMENT AND RUN UF WIRE FROM POST TO BOX.

O.K., REMMIE, WHAT'S NEXT?
NOW I CONNECT THE SERVICE AND THE UF WIRE TO THIS REMCON RELAY. THEN THE LV WIRE FOR THE SWITCH LEGS TO THE LOW VOLTAGE END OF THE RELAY.

WHERE DO THE SWITCHES GO?
ONE HERE IN THE KITCHEN, THE OTHER IN THE FRONT HALL. WATCH, I'LL JUST MAKE A HOLE LARGE ENOUGH TO FIT THE SWITCH. NO NEED TO CUT A GAPING HOLE — WITH REMCON LOW-VOLTAGE WIRING, YOU DON'T NEED A SWITCH BOX!

NOW, AFTER I DROP THE SNAKE THROUGH TO THE BASEMENT, YOU HOP DOWN THERE, ALEC, AND TIE THE LV WIRE TO THE SNAKE.
I GET IT! YOU'LL PULL THE 3 CONDUCTOR #18 WIRE UP AND WIRE IT TO THE SWITCH. THEN, WE'LL DO THE SAME THING FOR THE FRONT HALL SWITCH. BOY, REMCON SURE IS A TIME-SAVER... NO ARMORED CABLE TO RUN!


FELLERS... LEARN HOW REMCON'S FLEXIBILITY CAN SAVE TIME FOR YOU. SEND THIS COUPON TODAY FOR REMMIE'S FREE ELECTRICIAN'S MANUAL AND A COPY OF "REMMIE'S ADVENTURES IN LOW-VOLTAGE"... AN ILLUSTRATED SERIES ANSWERING YOUR QUESTIONS ON REMCON.

REMCON A DIVISION OF PYRAMID INSTRUMENT CORP. Dept. E-1
830 MERRICK RD. LYNBROOK, N.Y.

PLEASE SEND ME REMMIE REMCON'S NEW ELECTRICIAN'S MANUAL AND "REMMIE'S ADVENTURES IN LOW-VOLTAGE."

NAME _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

Depreciation and Capital Spending in the 1960s

DEPRECIATION will have an important bearing on the volume of spending for new plant and equipment in the 1960s. The reason is that depreciation provides a reliable flow of cash to business, and this cash is normally used to finance capital expenditures.

This is the outlook for depreciation and capital spending in the next decade as determined by the McGraw-Hill Department of Economics.

In a survey several years ago 90% of the companies said they made it a practice to spend all their depreciation on new plant and equipment. This may not work out for every company in every year, for capital spending plans are influenced by current needs for replacement and expansion as well as by the funds available. But it seems a valid generalization that most industrial companies do make this connection between the money coming in from depreciation of existing facilities and the money they spend for replacement and modernization.

If depreciation bears any reasonable relation to the rate at which plant and equipment are wearing out and becoming obsolete, then it makes sense that a company *should* be spending at least that much to keep its facilities up to date. And many authorities on depreciation believe that current depreciation allowances fall far short of the need for funds for replacement, because of inflation in the prices of construction and equipment.

How Much In The '60's

How much will American business have available for capital expenditures from depreciation allowances over the next decade? The McGraw-Hill survey last spring provided some reliable estimates of the trend for the years 1960 through 1962. And from these figures, it is possible to make a pretty good guess about the volume of depreciation during the remaining years in the 1960s. The reason is that most of the buildings and equipment against which business will be charging depreciation in the next ten years are already in place. So these estimates will miss the mark appreciably only if there is some major shift—up or down—in the annual rate of capital spending, or if there is a major change in the depreciation provisions of the tax law.

According to the U. S. Department of Commerce, depreciation allowances for all corporations added up to $19.9 billion in 1958. The McGraw-Hill survey indicated that these allowances rose 6% between 1958 and 1959. Thus, they are running about $21.2 billion this year. Based on respondents' answers to questions on the course of future depreciation allowances, it was estimated that they would increase about 14% between 1959 and 1962. On this basis, depreciation allowances would total $24.1 billion three years from now.

Events since the survey lead us to expect that depreciation allowances will increase slightly more over the next three years than was estimated at the time of the survey in 1959. When companies reported estimates of future depreciation allowances to us last spring, they based these estimates on quite conservative plans for capital expenditures in 1960, 1961 and 1962. Business has since increased its plans for capital expenditures. **The latest check-up on capital spending plans indicates that business now plans to spend several billions more on new plant and equipment in 1960 than it planned to do when surveyed last spring.** Plans for 1961 also are up more than $1.5 billion. These increases in the amount of plant to be depreciated will result in increased depreciation charges, reaching an estimated level of over $25 billion by 1962.

Looking Further Ahead

It is expected that depreciation allowances will continue to rise in the next decade. This will be so despite the gradual exhaustion of the fast amortization certificates under the program to expand defense production facilities initiated during the Korean War. Under this rapid amortization program, certificates authorizing five-year amortization were granted for facilities costing over $35 billion. Over $20 billion of this was eligible for fast write-offs, and most of this rapid amortization has now been

(ADVERTISEMENT)

WHAT IS LOADED WITH SPOTS
WILL SPRING SOON
AND HAS REAL TEETH IN IT ?

TURN PAGE ▶

IT'S GENERAL ELECTRIC'S

OPERATION SATURATION

A local TV spot campaign featuring the nearsighted **MISTER MAGOO,** motion picture cartoon character.

- At least **90 LOCAL TV SPOT** commercials packed in a concentrated 3-week G-E BULB-SELLING CAMPAIGN!
- Plus **ARTHUR GODFREY** on 194 CBS radio stations. Full page ads in **LIFE, SATURDAY EVENING POST.**
- Tie-in and Profit with a well-stocked G-E BULB DISPLAY!

(Get details and timing in your marketing area from your G-E bulb salesman.)

Progress Is Our Most Important Product

GENERAL ELECTRIC

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used up. But with a few exceptions, such as the steel industry, the increase in regular depreciation has been so great that the over-all total of depreciation and amortization has continued to rise. (The steel industry had smaller total depreciation allowances in 1958 than it had in 1957.)

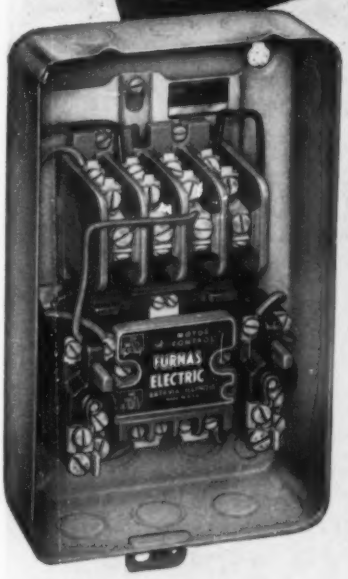
In the last few years, depreciation allowances of U.S. corporations have been increasing at an average rate of about $1.4 billion per year. Expectations are that this rate of increase will continue into 1962, and accelerate as the period 1963-1969 should be one of rapid additions to the stock of depreciable plant and equipment. The reasons are basically the expected growth in population and the wave of research and development that is filling the future with new products and processes. **By 1969—as they get to charging off depreciation on all this additional plant and equipment—corporations will probably have depreciation allowances totaling about $37 billion, or about 75% more than in 1959.**

Investment In The 60's

Because of population growth, plus new products, plus replacement of our present backlog of obsolete facilities we can look forward to a considerably higher demand for capital investment in the 1960s. The real demand for capital goods is rising for reasons like these. But we must also consider prices. If capital construction and capital equipment prices creep upward at a rate of only 1% per year, we can expect corporate capital expenditures of $50 billion in 1969, an increase of approximately four-fifths over 1959. On the other hand if capital goods prices rise at a 4% per year rate, the annual rate of increase since the end of World War II, capital spending of corporations would reach $65 billion in 1969, an increase of 132% in 10 years.

How adequate will depreciation allowances be, relative to these increased annual expenditures? Depreciation has gradually risen in relation to corporate capital expenditures since the end of World War II. In 1946 depreciation allowances equalled less than one-third of capital expenditures. In 1957 they accounted for 58%. In 1959 and this year, they will provide over 70% of the funds needed to finance outlays on new plant and equipment. As explained earlier, some part of this increase is due to changes in the tax laws. Thus, although depreciation may continue to rise in absolute amounts, it is likely to level out as a percentage of capital spending. A figure of 65-75% might be regarded as conducive to a high-investment economy.

NEW



Concept in Motor Control

BY

FURNAS ELECTRIC

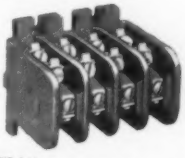
This NEW outstanding line of Magnetic Starters features advanced design to assure superior performance and longer life. It reduces parts inventory and provides quick and easy field modification.

Magnet Assembly

NEW Dual Voltage 110-220 or 220-440 Volt Coil reconnectable on the job. Magnet features just one moving part.

Thermal Overload Relay

NEW trip-free Thermal Overload Relays—manual or automatic reset. Third overload relay kit can be easily added in the field.



Contact Block

NEW non-tracking Contact Block is impact resistant. Completely visible and front removable silver-cadmium oxide contacts.

Modification Kits

NEW Modification Kits include push button, selector switch, pilot light, and third overload relay.

WRITE TODAY FOR FREE COLOR BULLETIN 14-B1, featuring Magnetic Starters through 400 hp. 1069 McKee Street, Batavia, Illinois.

A65

FURNAS

FURNAS ELECTRIC COMPANY

BATAVIA, ILLINOIS

SALES REPRESENTATIVES IN ALL PRINCIPAL CITIES

Installs electric heat in concrete by fast, new method

EASY-HEAT CONCRETE FLOOR HEATER

speeds farrowing pen construction!

This modern, young contractor is installing electric heat in the concrete floor of a new hog farrowing pen on an Indiana farm. Farmer's purpose: profitable hog farrowing the year around; positive protection for new-born piglets through the coldest winter.

PRE-ASSEMBLED WIRING

EASY-HEAT saves both time and money on this job by pre-spacing all wires, anchoring them in place in galvanized steel mesh mats which simply roll out into position. Mats are 18″ wide —come in 6′ and 10′ lengths. Designed for 42 watts per square foot.

UNIFORMLY EVEN HEAT

When the wiring is complete—*and it won't take long*—the finish layer of concrete will be poured right over EASY-HEAT. Wires *won't* float as concrete is poured. Piglets will eat, creep and sleep on uniformly even heat! Farrowing's practical November thru March!

PROFITABLE TO HANDLE

EASY-HEAT offers a broad "Electrified Farm" line, which also includes Automatic Heat Bands, Heat Cable, Adjustable Thermostats and underdrive Sno-Melter. Strong advertising builds brand demand — big profit potential for you. Find out more *today!* Write:

EASY-HEAT, INC., ***"Electric Anti-freeze Devices"***
Dept. EW, Lakeville, Indiana

Prevent Inflation

We all have a stake in national policies to prevent inflation. It is the one development that may stand in the way of steadily rising real investment over the years ahead. If we succeed in holding inflation to nominal proportions, the problem of financing higher investment will not be a great one. Our financial arrangements—particularly regarding depreciation—have been greatly improved in recent years. And we may hope for some further improvements in the period ahead. The needs for new plant and equipment—to take advantage of research developments, to replace older facilities, and to meet the needs of our growing population—are both imposing and urgent. It would be tragic to fail in meeting these needs, either by mismanaging ourselves into a prolonged recession or by the equal mis-management of business and public affairs that lead to rapid inflation. With confidence we shall avoid both these pitfalls, if we keep a wary eye for them, and maintain the upward trend of investment on which we are entering the 1960s.

NEWS

Dallas GE Supply Company Moves to New Location

DALLAS — General Electric Supply Co., division of the General Electric Co., has moved its Dallas, Texas district headquarters and warehouse to new quarters at 1910 South Good-Latimer Expressway, in Dallas.

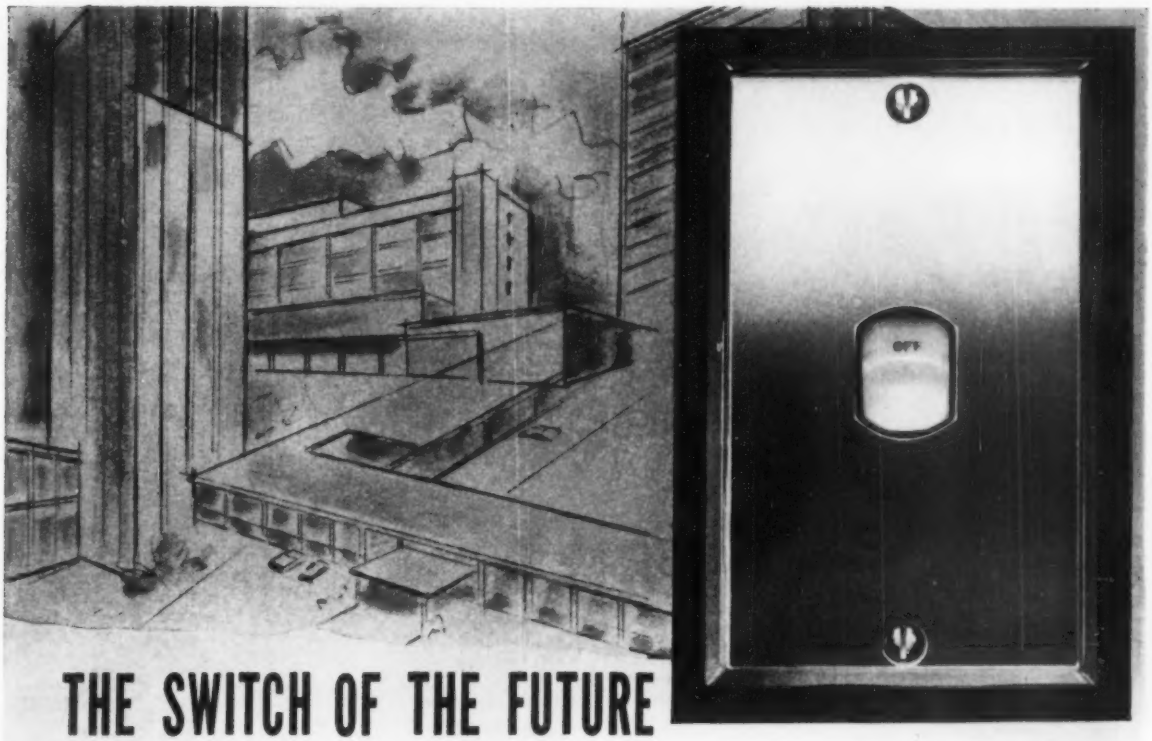
The new building contains 45,000-sq ft of floor space housing a city sales department, showrooms, offices and warehousing facilities. A parking area is also included.

GE's Dallas operation is the district headquarters for north, central, and west Texas, and southern New Mexico.

Chicago Plans Lighting Exposition For '61

CHICAGO — This city's first all-inclusive lighting exposition is planned for May 1, 2 and 3, 1961 to be held in conjunction with and as a part of the Chicago Electrical Industry Trade Show staged biennially by the Electric Association of Chicago.

Site will be the new Lake Front Exposition Hall now under construction, for which reservations were contracted recently by the association's managing director, C. C. Simpson, and the trade show committee chairman, Jack Wolfe of Westinghouse Electric Corp.



THE SWITCH OF THE FUTURE

is being used NOW! . . .

P&S ROCKER-GLO SWITCH

Many of today's switches are specialties primarily designed for appeal in decoration. Others are designed to meet the rugged use and performance called for by a heavy duty switch.

Now, one new switch, Rocker-Glo, combines eye-appealing design with heavy duty performance. So impressed with this combination are architects, engineers and contractors that Rocker-Glo is already being specified in leading hotels, motels, hospitals, commercial buildings and housing developments. Rocker-Glo has high-grade silver alloy contacts and positive make-and-break rocker arm construction. Its modern design and unique construction allow this switch to be pressed, pushed, rocked or rolled into instantaneous action.

Rocker-Glo switches are specification grade AC switches designed to be used at full current rating on tungsten filament and fluorescent loads (one switch takes the place of two ordinary AC-DC switches on fluorescent loads). It can be used anywhere old style toggle switches are used.

And Rocker-Glo's clean functional lines and soft beauty lend the final decorative touch.

Available in Despard interchangeable type, Despard type mounted on a strap and narrow rocker for tumbler switch plates. A specification grade switch, 15 and 20 amps. 120/277 volts AC.

Write for free Rocker-Glo bulletin – Dept. EW-160

P&S®

PASS & SEYMOUR, INC.

SYRACUSE 9, NEW YORK

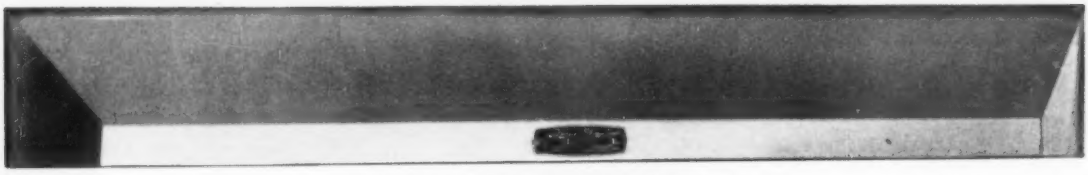
60 E. 42nd St., New York 17, N.Y. • 1440 N. Pulaski Rd., Chicago 51, Ill. • In Canada; Renfrew Electric Co., Ltd. Toronto, Ontario

TRADE-WIND LIGHT/HEATER/ VENTILATOR FOR BATHROOMS
The ultimate in comfort and convenience provides heat only—light only—or light and heat—exhaust only—or exhaust and light.

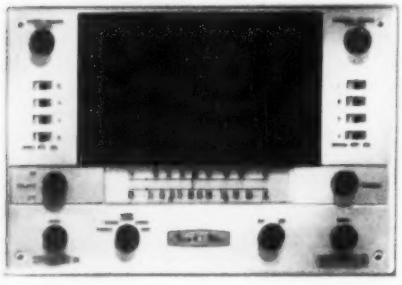
NEW

EXCITING

TRADE-WIND BUILT-IN CANOLECTRIC® CAN OPENER
New stunning flush design in antique copper or stainless steel — the **only** built-in electric can opener — Adds sales appeal to every kitchen.



TRADE-WIND KENT VENTILATING HOOD
Classically styled — Budget priced — High performance axial flow fan — Under-hood lights — Front panel switches — Completely pre-wired — 36" and 42" lengths in copper enamel.



AVAILABLE

TRADE-WIND INTERCOM / MUSIC SYSTEM
AM and FM radio — True fidelity reception — Outside and inside speakers — Antique copper or brushed chrome master panel.

...4 ADDITIONS TO THE QUALITY *Trade-Wind* LINE FOR 1960!

Trade-Wind DIVISION OF ROBBINS AND MYERS, INC. • 7755 PARAMOUNT PL. • PICO RIVERA, CALIF. • DEPT. EW

SEE OUR DISPLAY AT BOOTH 450, SHERMAN HOTEL, N.A.H.B. SHOW, CHICAGO

Utilities Strike Blow At Public Power Plans

NEW YORK—Investor-owned utilities in the Rocky Mountain area have proposed a plan that may curb public power advocates in that section, save the U.S. large sums of money, and set a pattern of action vital to the survival of all private industry facing government competition, Electrical World, McGraw-Hill publication, reports.

The utilities, sparked by Utah Power & Light Co. and Arizona Public Service Co., presented to the U.S. Bureau of Reclamation details of a transmission expansion plan that permits energy to be wheeled to federal preference customers from the major unit of the Bureau's Upper Colorado River Storage Project at Glen Canyon. It also provides economic integration of the two private systems.

Other utilities in the region simultaneously offered plans to construct facilities for wheeling federal energy from the project's Flaming Gorge unit, and to extend transmission and connections in such a fashion as to make the use of private company lines very attractive to the government.

What makes the plan ideal, the publication states, is that the major link involved—a 425-mile circuit from Salt Lake City to Flagstaff, Ariz.—is justifiable economically on its own merits, especially considering the seasonal diversity between the growing Arizona and Utah systems.

Six Million All-Electric Homes Predicted By 1970

NEW YORK—By 1970 it is predicted that at least six million Americans will be living in homes serviced totally by electricity, according to the Live Better Electrically Program sponsored by the Edison Electric Institute.

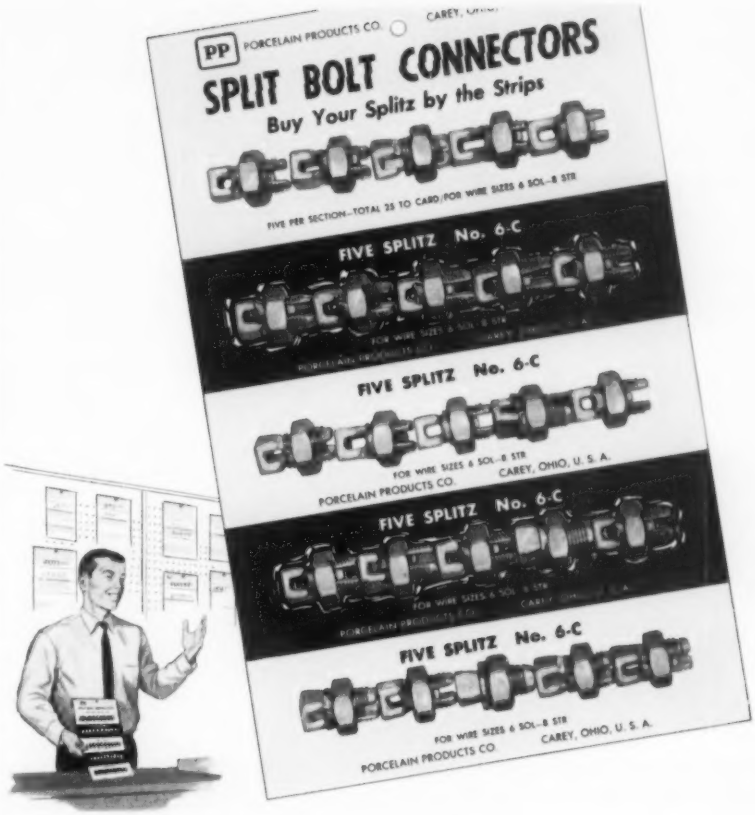
The trend towards complete electric living, according to E. O. George, chairman of the EEI Sales Division, is due largely to the successful demonstration that electric house heating is efficient and practical in all climates.

According to George, electric utilities have worked with manufacturers of electric heating so that equipment is suitable for all weather requirements.

Massachusetts Distributor Elected As NAED Member

NEW YORK — Baynes Electric Supply Co., 43 Manchester St., Brockton, Mass., has been elected to membership in the National Association of Electrical Distributors.

Harold A. Baynes, Jr., is owner of the firm.


PP PORCELAIN PRODUCTS CO.
SPLIT BOLT CONNECTORS
Buy Your Splitz by the Strips
FIVE SPLITZ No. 6-C
FIVE SPLITZ No. 6-C
FIVE SPLITZ No. 6-C
FIVE SPLITZ No. 6-C
PORCELAIN PRODUCTS CO. CAREY, OHIO, U. S. A.

DISPLAY AND SELL . . . with SKIN-PAK CARDS

• Split Bolt Connectors • Service Entrance Connectors • Solderless Terminal Lugs

Here's one of the sharpest merchandising ideas to hit the electrical supply industry in years. Porcelain Products Co. now offers split bolt connectors, service entrance connectors, and solderless terminal lugs on "Skin-Pak" cards. These cards hold the products under a tough brilliant layer of clear plastic which shows off the connectors to best advantage. When hung in a conspicuous place these colorful cards work for you like another salesman. They are perforated in strips containing convenient resale quantities. This helps upgrade those small purchases. You will also like the convenience of visual inventory, ease of handling, and cleanliness. Your customers will like the ease of handling and carrying, the electrically clean connectors, and the protection against thread damage. Write for full information.

OPERATION FULL STOCKING

To acquaint you with the many diverse products that you can consolidate on one purchase order, ask your Porcelain Products representative for more information about Operation Full Stocking. There's something special in it for you!

PORCELAIN PRODUCTS CO. PP

225 N. PATTERSON ST., CAREY, OHIO

SHERMAN TERMINAL LUGS AND CRIMPING TOOLS

SPEED INSTALLATION – REDUCE COSTS!

INDENTED CRIMP FOR GREATER RESISTANCE TO PULL-OUT

VOID FREE CONNECTION

MONEY SAVER
SAVE UP TO 15% WITH SHERMAN
Write for FREE Sample

SHERMAN UNI-CRIMP LUG

SHERMAN "ST" LUG

SHERMAN HAND CRIMPING TOOLS
Portable or bench mounted for fast, easy installation of money-saving Sherman terminal lugs.

H. B. SHERMAN MANUFACTURING CO., BATTLE CREEK, MICHIGAN

SAFETY SWITCHES
That Meet the New NEMA Standards
KNIFE BLADE INDUSTRIAL FUSIBLE AND NOT FUSIBLE

30 TO 1200 AMPERES

SERVICE EQUIPMENT
A Fusible Device for Every Need
DRYER — RANGE — WATER HEATER HEATING PANELS — AIR CONDITIONERS

30 TO 200 AMPERES

LIVE BETTER ELECTRICALLY

2½" x 2½"
4" x 4"
6" x 6"
8" x 8"
IN
1 TO 5 FOOT LENGTHS

WIRING TROUGHS
With Knockouts and Without
A COMPLETE LINE OF FITTINGS

SINGLE — DOUBLE POLE AND SWITCHING NEUTRAL
15 to 50 Amps.
THERMAL MAGNETIC QUICK MAKE & BREAK

"E-Z-RED" CIRCUIT BREAKERS
INTERCHANGEABLE AND NON-INTERCHANGEABLE

WRITE FOR FREE NEW CATALOG

The WADSWORTH Electric MFG. CO. INC.
COVINGTON, KENTUCKY

James H. McGraw Award Received By Contractor

NEW YORK—The 1959 Contractors Medal and Purse, given under the James H. McGraw Award for Electrical Men, has been presented to Edwin H. Herzberg, manager of the Milwaukee Chapter of the National Electrical Contractors Association.

Herzberg received the award at the general meeting of the National Electrical Contractors Association recently at Miami Beach, Fla. He received the award for his "initiative and dedicated personal leadership in the development and building of the electrical contracting industry's apprenticeship and training program."

• **Four Awards** — Thirty-four years ago the late James H. McGraw, founder of the McGraw-Hill Publishing Co., Inc., established a series of four awards to encourage constructive thinking for the advancement of the electrical industry. These awards, consisting each of a bronze medal and a purse of $100, are given for personal contributions of merit in the manufacturing, contracting and distribution branches of the electrical industry and for cooperation within the industry.

An endowment to perpetuate these awards is administered by a committee of awards representative of the four branches of the industry.

NWB Publishes Two New Periodicals

NEW YORK — Beginning this month, the National Wiring Bureau will publish two new periodicals.

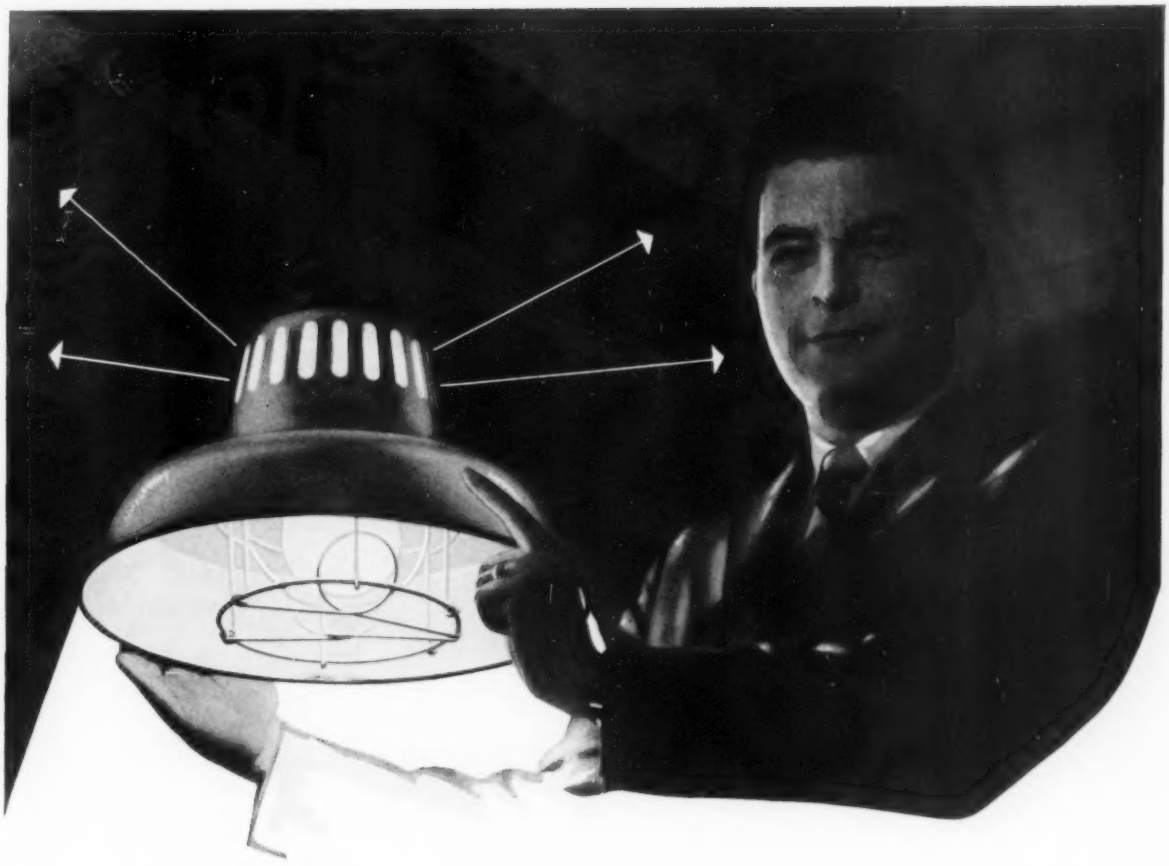
One of the publications, the new *Wiring Promotion Reporter* will be edited for utility personnel, manufacturers representatives, distributors, NECA chapter managers, league managers and wiring bureau managers.

The other periodical, *Profit Idea Digest*, will be four pages to six pages in newsletter style, edited exclusively for electrical contractors.

NAED Southern Meeting To Hold Workshop Sessions

Edgewater Park, Miss. — Distributors attending the National Association of Electrical Distributors' Southern Region Convention in this city January 17-20 will have the opportunity to attend one of five workshop sessions.

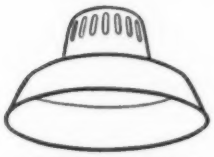
The following sessions are open to members and to manufacturers alike: Paper Work; Employee Training—Sales Meetings; Electric Housewares; New Markets—New Products; and Trade Relations.



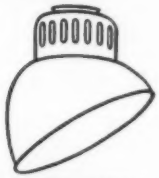
Now you can get optional

SLOTTED Reflectors

on these Crouse/Hinds Lighting Fixtures



Explosion-proof—Type EV, Dust-ignition-proof—Type DL in slotted dome or angle reflectors.



Vapor-tight, weather resistant types V and VM in slotted dome or angle reflectors.

Reduce fatigue, accidents and worker tension; improve working environments and employee relations. In both original and replacement installations in major plants, the new slotted reflectors—exclusive with Crouse-Hinds—produce the following results:

- Elimination of dark, dungeon-like areas above reflectors
- Elimination of harsh brightness contrast, improving visibility and seeing comfort
- Reduction of fatigue of workers, and accidents due to fatigue
- Increase of production in machine work, assembly and inspection operations
- Reduce fixture operating temperature and worker discomfort from reflected heat, especially with low-hanging fixtures
- Reduced accumulation of dirt and dust, due to improved air circulation through reflectors
- Slotted reflectors are white enamel finish inside and out

FOR COMPLETE INFORMATION on all Crouse-Hinds lighting fixtures equipped with the new slotted reflectors, call your nearest Crouse-Hinds distributor, or write us.

CROUSE-HINDS
SYRACUSE / NEW YORK

OFFICES: Atlanta Baton Rouge Birmingham Boston Buffalo Charlotte Chicago Cincinnati Cleveland Corpus Christi Dallas Denver Detroit Houston Indianapolis Kansas City Los Angeles Milwaukee New Orleans New York Omaha Philadelphia Pittsburgh Portland, Ore. St. Louis St. Paul Salt Lake City San Francisco Seattle Tulsa Washington
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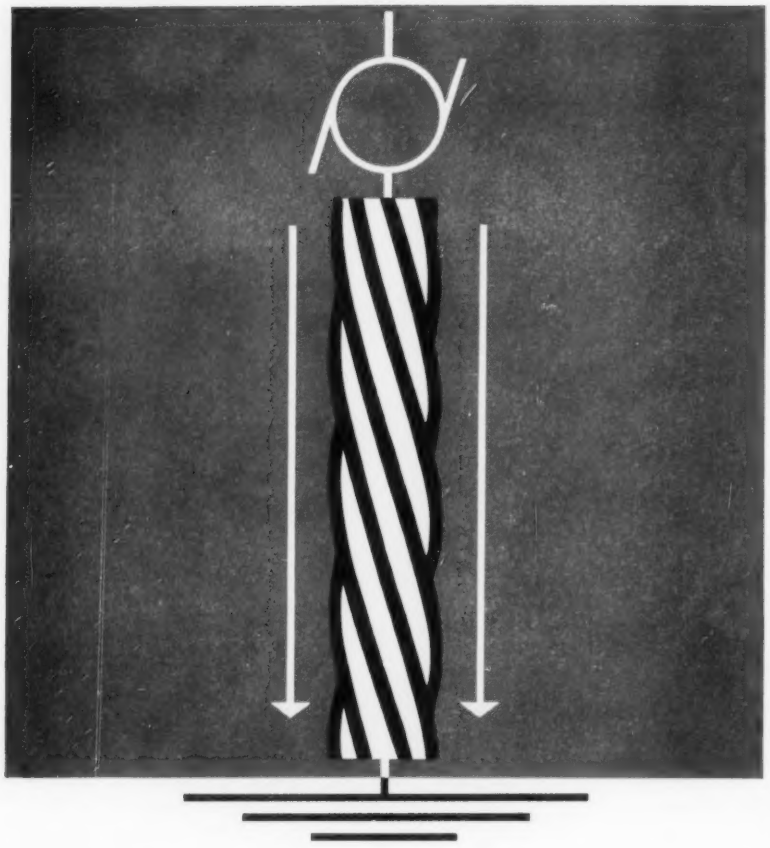
CROUSE-HINDS COMPANY OF CANADA, LTD., TORONTO, ONT. CROUSE-HINDS INSTRUMENT COMPANY, INC., SILVER SPRING, MARYLAND



It's safe... it's grounded with

CF&I Galvanized Steel Strand

When grounding electrical installations, you can't afford to use "second best" wire. Insist on a dependable steel strand that will give years of trouble-free service – CF&I Galvanized Steel Strand. Woven in seven- or three-wire constructions, CF&I Galvanized Steel Strand is made in accordance with ASTM Specification A-363 zinc coated steel Overhead Ground-Wire Strand.

For guy, messenger and other applications we recommend ASTM Specification A-122. *CF&I is also prepared to produce uniformly galvanized strand to your own specifications.*

Remember . . . for quick delivery and complete information, call the nearby CF&I sales office or your local electrical distributor.

GALVANIZED STEEL STRAND
THE COLORADO FUEL AND IRON CORPORATION

In the West: **THE COLORADO FUEL AND IRON CORPORATION** — Albuquerque · Amarillo · Billings · Boise Butte · Denver · El Paso · Farmington (N. M.) · Ft. Worth · Houston Kansas City · Lincoln · Los Angeles · Oakland · Oklahoma City Phoenix · Portland · Pueblo · Salt Lake City · San Francisco San Leandro · Seattle · Spokane · Wichita

In the East: **WICKWIRE SPENCER STEEL DIVISION** — Atlanta · Boston Buffalo · Chicago · Detroit · New Orleans · New York · Philadelphia

CF&I OFFICE IN CANADA: Montreal

CANADIAN REPRESENTATIVES AT: Calgary · Edmonton · Vancouver · Winnipeg

6968

NEMA Standards Publications Available

NEW YORK—The following new and revised NEMA Standards Publications are available from the National Electrical Manufacturers Association, 155 East 44th St., New York 17, N.Y.:

• **AB 1-1959 Molded Case Circuit Breakers**

These standards cover air circuit breakers, single-pole and multipole, assembled as an integral unit in a supporting and enclosing housing of insulating materials, for current ratings up to and including 800-amps in frames not exceeding that rating, for nominal voltages up to and including 600-v alternating current, 250-v dc, and with interrupting current ratings more than 1000 amps. (40c per copy)

• **BC 1-1959 Bituminized-fibre Conduits and Fittings**

The following information is given for bituminous-fibre conduits and fittings for the installation of wire and cable; types, sizes, wall thickness, straightness of bore, joints, water absorption, chemical and physical properties. (30c per copy)

• **CP 1-1959 Shunt Capacitors**

Service condition, rating, manufacturing, testing, application and operation information for shunt capacitors is covered in this revised publication. The terms used are defined. (50c per copy)

• **DC 4-1959 Dial Arrangement of Warm Air Limit and Fan Controls**

The operating range, differential, dial stop and shipping setting for dial arrangement of warm limit and fan controls are given. (20c per copy)

• **DC 5-1959 Surface-type Electric Water Heater Controls**

This booklet covers the mounting means and terminal markings for surface-type electric water heater controls. (20c per copy)

• **DC 6-1959 Nameplate Information, Ampere Ratings, Voltage Rating and Load Characteristics**

The information given in this booklet applies to automatic temperature controls in general. (20c per copy)

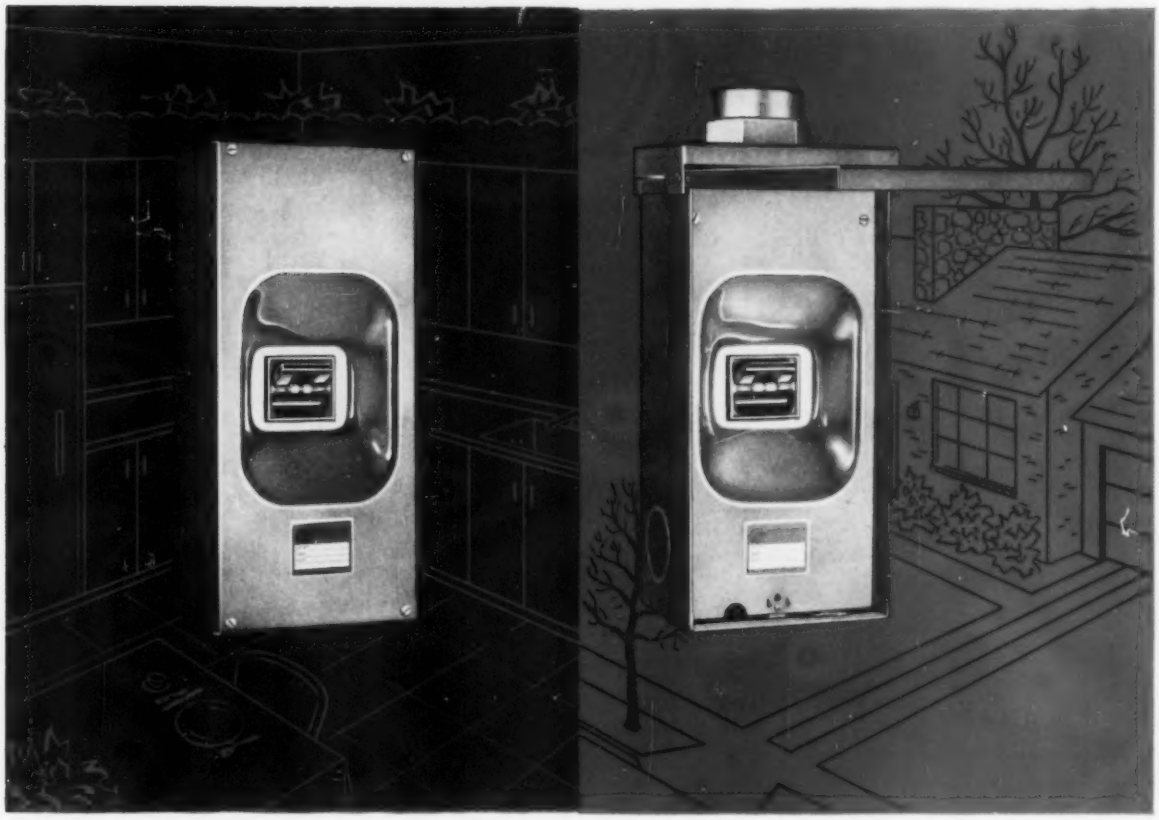
• **FU 1-1959 Low-voltage Cartridge Fuses**

This booklet contains information on the rating, performance, characteristics and manufacturing of Class H, J, L, and M low-voltage cartridge fuses rated at 600-v or less, ac and/or dc. (70c per copy)

• **HE 2-1959 Electric House Heating Equipment**

This standards publication covers definitions, ratings, markings, methods of test, performance, safety and durability of electric space heating equipment of the types principally used in residences, such as baseboard heaters,

NEW SERVICE ENTRANCE EQUIPMENT



200-AMP CAPACITY... CIRCUIT BREAKER CONVENIENCE ... AT A COMPETITIVE COST

You will like the extra convenience of Heinemann's new 200-amp service entrance equipment . . . and so will your customers.

Trim, compact, smaller than comparably rated fused pull-outs, these units offer considerable savings in terms of easier installation and more efficient operation.

Installation features would make an apprentice happy. Wiring space is plentiful . . connections are easily made with solderless screw-type connectors . . knockouts are placed so that you can run-in conduit from any angle.

Completely non-thermal, the *magnetically* actuated Heinemann circuit breaker eliminates nusiance tripping and other temperature-caused troubles. You can therefore locate the unit wherever most convenient . . . next to heat lines or out in the hot sun, if necessary. The breaker will always carry full rated current, will always trip as specified.

Breaker protection provides other conveniences as well: no bothersome fuse changing, simplified switching: the switch handle has only two positions ON and OFF. No reset position; no confusion possible.

Rated at 120/240V AC, two or three wire service, the new Heinemann service entrance equipment is available in outdoor or indoor enclosures. Both are of heavy-duty steel in a grey baked enamel finish. Outdoor enclosures are raintight, with hinged covers that may be padlocked against tampering.

You'll be pleasantly surprised by the cost. It's little more than that of comparably rated fused equipment.

For full information send for Bulletin 1003

HEINEMANN
ELECTRIC COMPANY
152 Plum Street, Trenton, N. J.

Circuit breakers

S.A. 1959

YOUR ALL IN ONE LINE

PLUG FUSES
CARTRIDGE FUSES
SWITCHES AND RECEPTACLES
U GROUND DEVICES
INTERCHANGE DEVICES
EAGALOK AND ARMORED CAPS AND CONNECTORS
COMBINATION DEVICES
WALL PLATES
RANGE—DRYER RECEPTACLES AND CORDS AND PLATES
TRANSFORMERS
SOCKETS—WIRE
CORDSETS—NITE LITES
DESK AND BED LAMPS
ELECTRICAL SPECIALTIES

EAGLE

"PERFECTION IS NOT AN ACCIDENT"

EAGLE ELECTRIC MANUFACTURING CO., INC.
LONG ISLAND CITY, N.Y.

THE MOST COMPLETE LINE FOR ALL YOUR ELECTRICAL NEEDS

Exclusive! Trine's new lighted mite for ringing bells and chimes

electric push button

SOLID BRASS TOTALLY ENCLOSED

DISPLAY DEAL NO. 11 dramatically introduces the new lighted "mite," with FREE transformer ready to plug in and light up for demonstration. Includes stock tray and 10 pieces assorted backup stock.
Total List Price $14.10

Mr. Distributor
Trine's nation-wide full-color promotion is reaching your customers now. They will order direct from you—you'll profit with Trine's "Lighted Mite".

The standard ⅝" flush, midget push button engineered with a miniature electric bulb that stays lit for years. Replaces all push buttons of this type, with or without plates.
NO SPECIAL WIRING REQUIRED

LIST PRICES
No. 155 6-16 volt $1.25
No. 156 24 volt $1.60
POLISHED BRASS OR CHROMIUM FINISH

Write for Full Color Brochure

Trine Manufacturing Corporation, 1430 Ferris Place, New York 61, N. Y.

wall heaters and heating cable. (30c per copy)

• **HV 1-1959 Summary of Characteristics of Apparatus Insulators**

The characteristics of cap-, pin-, and post-type apparatus insulators are given. These characteristics include the technical reference number of the unit or stack; number of units and height per stack; diameters; cantilever, tensile, torsional and compression strength; radio influence voltage data; low-frequency puncture, flashover and withstand values; leakage and dry arcing distance; and impulse flashover and withstand values. (25c per copy)

• **SM 10-1959 Piping Systems for Steam Turbine Generator Units**

The purpose of this publication is to outline the basic principles and specific requirements for the design, fabrication and installation of oil piping, steam gland piping and integral steam piping for steam turbine generator units rated 15,000-kw through 33,000 kw. (25c per copy)

• **SM 20-1958 (Revised November 1959) Mechanical-drive Steam Turbines**

The characteristics of mechanical-drive steam turbines are detailed in this book. Separate sections cover definitions, nomenclature, shipment and installation, and steam piping systems. ($2.00 per copy)

Alibi Almanac For Salesmen

Attention Sales Managers! As you are about to enter a new year, be prepared for those sales that seem to slip through your salesmen's fingers, for here are probably the reasons you'll receive:

JANUARY—People spent all their money for the holidays.

FEBRUARY—People saving their money to pay their taxes.

MARCH — Everybody's paying their taxes.

APRIL—People spent too much on Easter.

MAY—Looks like a wet summer, everyone worried.

JUNE—Everybody is saving for a vacation.

JULY—Everybody is away on vacation.

AUGUST—I was on vacation.

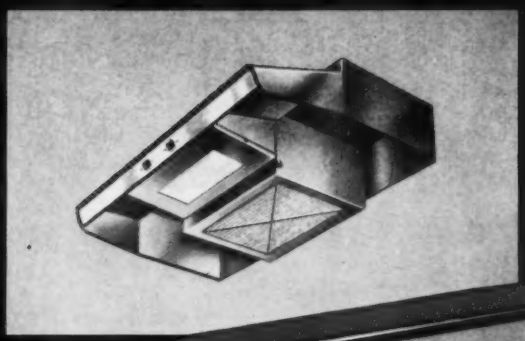
SEPTEMBER—Everybody is back from vacation and broke.

OCTOBER—Customer waiting for fall clearance or for new models.

NOVEMBER—Everybody too upset over elections.

DECEMBER—Customers spending all their money on Christmas.

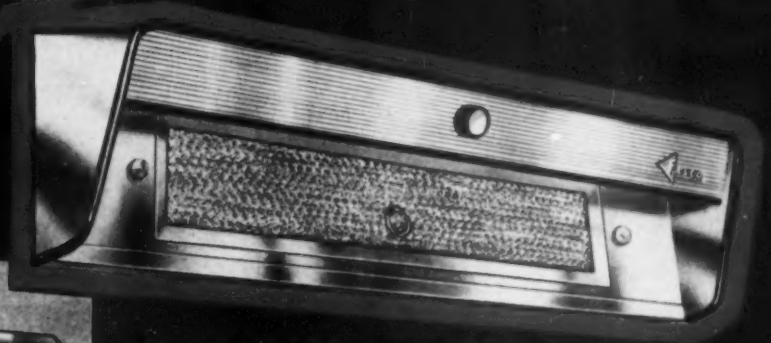
The foregoing almanac appeared in a recent issue of *Electrical New Orleans.*

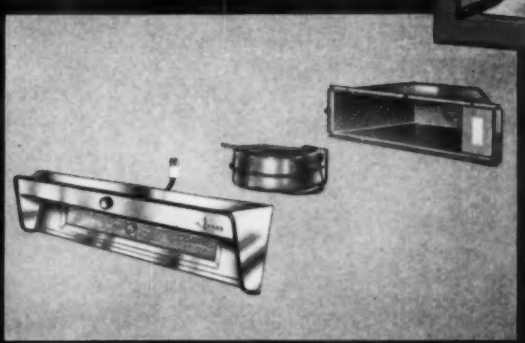


New duct free hood

60 Series featuring smart slim-trim styling to blend with today's appliances • Up front rocker type switches • Extra heavy duty grease filter • New replaceable super-absorbing activated charcoal filter • Built in enclosed light.

New scientifically designed air flow passes air over activated charcoal filter at just the right rate for maximum odor absorption. Filters slide in for ease of removing and replacing. Fresh, clean air is discharged up and away from face and cabinets. Ideal for apartments or interior walls far from exterior outlets.





New built-in oven hood

80 Series featuring exclusive up front switch out of the heat and grease. Styled to match the other Fasco Slim Trim look hoods • Snap out filter • Quick to clean . . . hood can easily be removed • Pre-wired.

Here's an oven hood designed as a companion piece to the line of other Fasco hoods. Powerful, impeller ventilator quickly exhausts cooking odors and grease fumes. Installs quickly in a small space allowing plenty of room for duct work. Housing can be installed so that outlet is either right or left to miss possible obstructions.

YOU CAN FIGURE ON FASCO FOR THE NEWEST!

MEMBER

See new Fasco products at
Home Builders Show
Hotel Sherman, Space 453-454

FASCO INDUSTRIES, INCORPORATED
North Union and Augusta · Rochester 2, New York

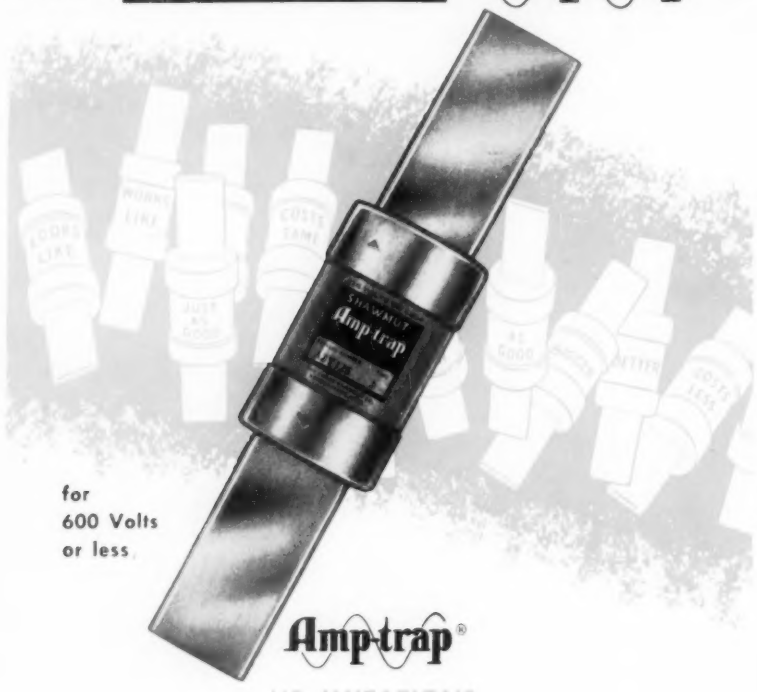
Please send full information on new Fasco products.

Name_____

Address_____

City_____ Zone____ State_____ EW-1-60

HOW GOOD IS... AN IMITATION Amp-trap®?



VS IMITATIONS

Amp-traps are *our* products. We originated and developed them. We alone manufacture them. They are so good that others are now imitating them. This is flattering because it indicates Amp-trap is superior. But, don't be confused by imitations.

Amp-trap®

VS SUBSTITUTES

"Just like Amp-trap." "As good as Amp-trap." "Works like Amp-trap." "Better than Amp-trap." These are the deceptive phrases that imitators must use. Without them they can neither explain nor sell their substitutes.

NOTHING TAKES THE PLACE OF

Amp-trap®

Whenever you *need* Amp-trap, you *want* Amp-trap — not an imitation or a substitute. Amp-trap is a very special current limiting device with high interrupting capacity. Regardless of claims, imitations aren't enough. More than 27 patents prove it. *Nothing takes the place of Amp-trap!* For your own protection specify Amp-trap. Then — make sure you get it.

Amp-trap® – Always At The Starter

REGISTERED UNITED STATES PATENT OFFICE

THE **CHASE-SHAWMUT** CO.

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Subsidiary of I-T-E CIRCUIT BREAKER CO.

Est. 1892

Amp-trap® Tri-onic® td C-O-T® TRIONIC® ONE O-T TIME

CALENDAR OF EVENTS

JANUARY

National Housewares Exhibit
Navy Pier
Chicago, Ill.
January 11-15

National Association of Home Builders
16th Annual Convention & Exposition
Chicago, Ill.
January 17-21

National Association of Electrical Distributors
Southern Region Convention
Edgewater Gulf Hotel
Edgewater, Miss.
January 17-20

American Institute of Electrical Engineers
Winter General Meeting
Hotel Statler
New York, N.Y.
January 1-February 5

FEBRUARY

National Industrial Electrical Conference
Netherland-Hilton Hotel
Cincinnati, Ohio
February 1-4

National Electrical Week
February 7-13

Electrical League of New York, Inc.
National Electrical Week Luncheon
Sheraton-Astor Hotel
New York, N.Y.
February 9

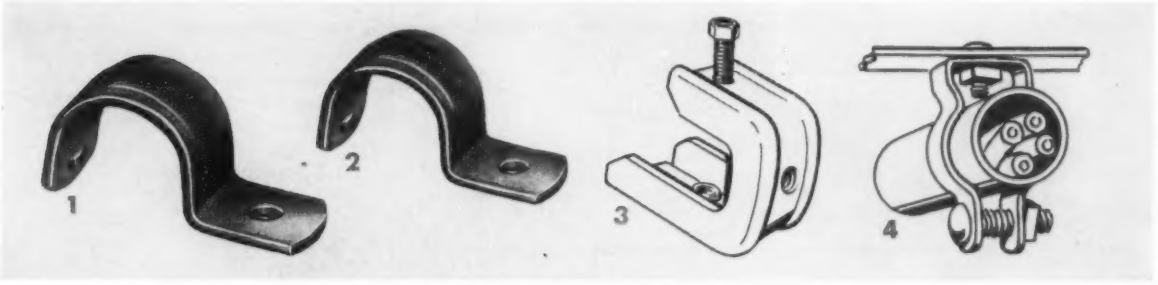
Upper Midwest Electrical Industrial Conference
Leamington Hotel & Municipal Auditorium
Minneapolis, Minn.
February 14-17

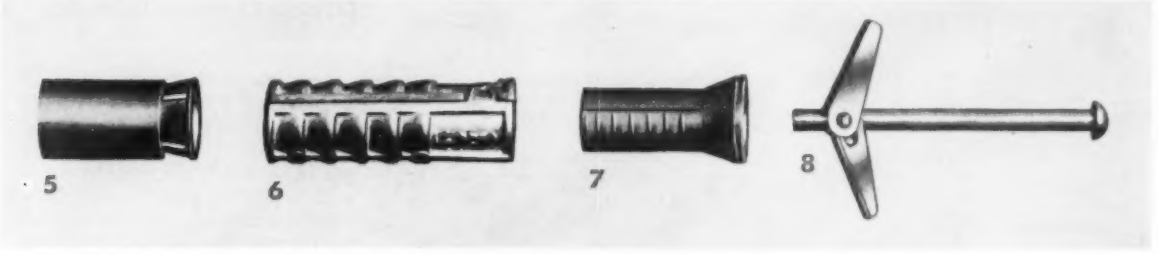
National Rural Electrical Co-op Association
18th Annual Meeting
Kiel Auditorium
St. Louis, Mo.
February 22-25

saves you time and money

BLACKHAWK'S holding, anchoring and fastening fittings are simple, quick to install

put them all on one order





1. SNAP-STRAP FOR RIGID CONDUIT

The famous BLACKHAWK 700 line is the original snap on clamp that snaps tighter and holds its grip. The B-I Snap-Strap has the "hold-bump" at the opened end of the bracket — really grips — resists slips like an alligator wrench. Ribbed bracket adds to the snap, provides rigid contact support of the conduit. Made of heavy gauge steel, zinc plated after fabrication. Faster installations mean more profit for your customer and for you. Sizes: ⅜" to 2".

2. SNAP-STRAP FOR THINWALL CONDUIT

The 1700 line of Snap-Straps are the same style as the 700 line decribed above, except they are made to fit Thinwall conduit. Electrical contractors report big labor saving by using Snap-Straps spot welding for installation to steel frame work. Sizes: ½" to 2".

3. BEAM CLAMP

Made of heavy gauge pressed steel-plated. Complete with case hardened set screw. Fits up to ½" thick beam flange, 1/4-20 tapped holes.

4. CONDUIT HANGER

Designed to hold thinwall and rigid conduit. ¼" hole in base permits use with toggle bolt, wood screw or anchor. Complete line of sizes.

PLUS BLACKHAWK ANCHORING AND FASTENING DEVICES

5. Caulking Anchors for machine screws, designed for use in hard brittle material. Caulking tool included with each box. (Screws not included.)

6. Lag screw expansion shields of hard zinc alloy, non-creeping. Less bolt binding for easy installation.

7. Wood screw anchors with tapered rectangular hole that causes sidewise shearing action for greater holding power. Screw cuts own threads. Excellent for use in concrete, tile, plaster or masonry.

8. Spring type toggle bolts, zinc plated, with double wings that lock tightly to screw under pressure. Prevent loosening by vibration. Round head screws, zinc plated and fully threaded.

Immediate delivery from adequate stocks to electrical wholesalers only. Write today for Blackhawk's complete catalog of electrical fittings and specialties.

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ADJUSTABLE WRENCH
with thin tapered jaws

Also . .
Slip Joint, Tongue-and-Groove, Cutting, and Linesman's PLIERS; HAMMERS; WRENCHES.

Perfectly balanced for easy use. Drop forged, heat treated and tempered for tough durability, highest tensile strength. Full mirror polished finish. Four sizes: 6", 8", 10", 12", with maximum jaw opening ¾", 1", 1-3/16", 1⅜". Also 3-pc. set of 6", 8", 10" sizes.

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THE Adalet MANUFACTURING COMPANY
14300 LORAIN AVENUE • CLEVELAND 11, OHIO

Willard C. Brown

Willard C. Brown has been elected president of the **United States National Committee of the International Commission on Illumination.** Brown is manager of lighting education for the Large Lamp Department, **General Electric Co.,** Cleveland, Ohio.

Phillip D. Reed, former chairman of the **General Electric Co.,** retired recently after being associated with GE for 33 years.

Prior to retirement, he resigned as board chairman and since then has been a director, chairman of the finance committee of the board of directors and consultant to the board chairman, Ralph Cordiner.

W. W. Booth has been appointed manager-marketing, lighting, for **General Electric Supply Co.,** Bridgeport, Conn.

Charles R. Matthews has joined the staff of **Standard Electric Supply Co.,** Oakland, Calif. Matthews was formerly northern California district manager for Westinghouse Electric Supply Co.

Richard A. Daunoras has been named treasurer for **Advance Transformer Co.,** Chicago, Ill. Daunoras was formerly comptroller of the firm.

The following officers have been elected to the Board of Directors of the **Triangle Conduit & Cable Co. Inc.,** New Brunswick, N.J.; **J. E. McAuliffe,** chairman of the board and executive director; **J. G. Slater,** president; **C. S. Menger,** executive vice-president; **C. V. McKay,** vice president-manufacturing. **J. M. Slater,** treasurer. **J. E. McAuliffe, Jr.,** secretary. **W. R. Pfriender,** assistant treasurer. **E. J. Simmons,** assistant secretary.

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NEW Ettco THW BUILDING WIRE

with a rating of 75°C

for both wet and dry locations

- Lower in Cost
- Lighter in Weight
- Smaller in Diameter
- Smooth and Lubricated for easier pulling
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- Lower installation cost because of quicker installation
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- Available in all colors and sizes

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Chicago, Ill.	Houston, Tex.	New Haven, Conn.	Seattle, Wash.
Cleveland, O.	Jenks, Okla.	New Orleans, La.	St. Louis, Mo.
Columbus, O.	Los Angeles, Cal.	Philadelphia, Pa.	Syracuse, N. Y.
Dallas, Tex.	Louisville, Ky.	Pittsburgh, Pa.	Tampa, Fla.

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LEVITON *specification grade* Switches and Receptacles

Compare Leviton wiring devices under any conditions . . . Leviton gives you the utmost in performance at minimum cost . . . with absolutely no compromise in quality.

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CHECK THESE TYPICAL FEATURES

- Heavily sectioned molded phenolic bases.
- Full gauge straps, completely rust proofed and riveted to assemblies.
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- Terminal screws with large heads to accommodate No. 10 conductors and backed out for quick wiring.
- Individually packed with mounting screws attached to straps.
- All switch mechanisms utilize high grade bronze for wide, double wiping contacts.
- Assemblies riveted for permanence.
- All power outlets have double-wiping phosphor bronze contacts.
- Meet U.L., C.S.A. and Federal Specifications.

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For building wire and cable contact our subsidiary: AMERICAN INSULATED WIRE CORP.

David Siegel has been appointed president of **Standard Electric Supply Co.,** Milwaukee, Wis. Siegel succeeds **Morris Stern,** former president of the firm, who died last August. Other new officers appointed are: **Russell Beckerman,** vice-president; **James F. Stern,** secretary; **Adolph Stern,** treasurer.

R. B. Mitchell has been appointed manager, distributor sales, **Steel City Electric Co.,** Pittsburgh, Pa. Other appointments are: **G. W. Bickerstaff,** manager, contractor sales and specifications; **Norman A. Pemberton,** advertising, publicity and sales promotion; **Anthony A. Goodchile,** manager, slotted angle sales.

Bernard (Bud) Purcell has been named assistant vice president in charge of operations and general manufacturing manager, for **Emerson Electric Mfg. Co.,** St. Louis, Mo. **Don Norton** has been appointed assistant manufacturing manager and manufacturing engineer in charge of the newly formed Manufacturing Engineering Div. **William E. Roof** and **Burt Lasko** have been named assistant manufacturing engineers. **Edward Johnson** has been appointed production superintendent.

A. O. Grotenhuis, Southern Pacific Div., sales manager for **Thomas Industries Inc.,** Louisville, Ky. has been selected to serve as a member of the Guidance Committee of the Business Development Section of the **Pacific Coast Electrical Association, Inc.** His specific assignment will be that of vice-chairman of the Residential Lighting Committee.

James R. Chambers, sales manager of the Lighting Products Div. of the **Appleton Electric Co.,** Chicago, has been elected national vice president of the **Illuminating Engineering Society.** Chambers is well known as a speaker and writer on commercial and industrial lighting.

Richard J. Sargent has been named to head the newly formed **Westinghouse Portable Appliance Division, Westinghouse Electric Corp.** He will headquarter in Pittsburgh, Pa. Both portable and major appliances formerly were included in the electric appliance division's organization. Now portable appliance operations are given full division status, according to a company announcement. **R. B. Carter** has been appointed manager of apparatus and industrial sales, **Canadian Westinghouse Co.,** Westinghouse Electric Corp., Vancouver, B.C.

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THE ORIGINAL DUAL-GRIP ENTRANCE HEADS*

BY WEAVER

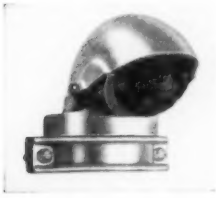
easier to use . . . just tighten the screws

"Dual-Grips" save your customers time and money.

When "Dual-Grips" are used on EMT, your customers know they're "on to stay" —with no special fittings.

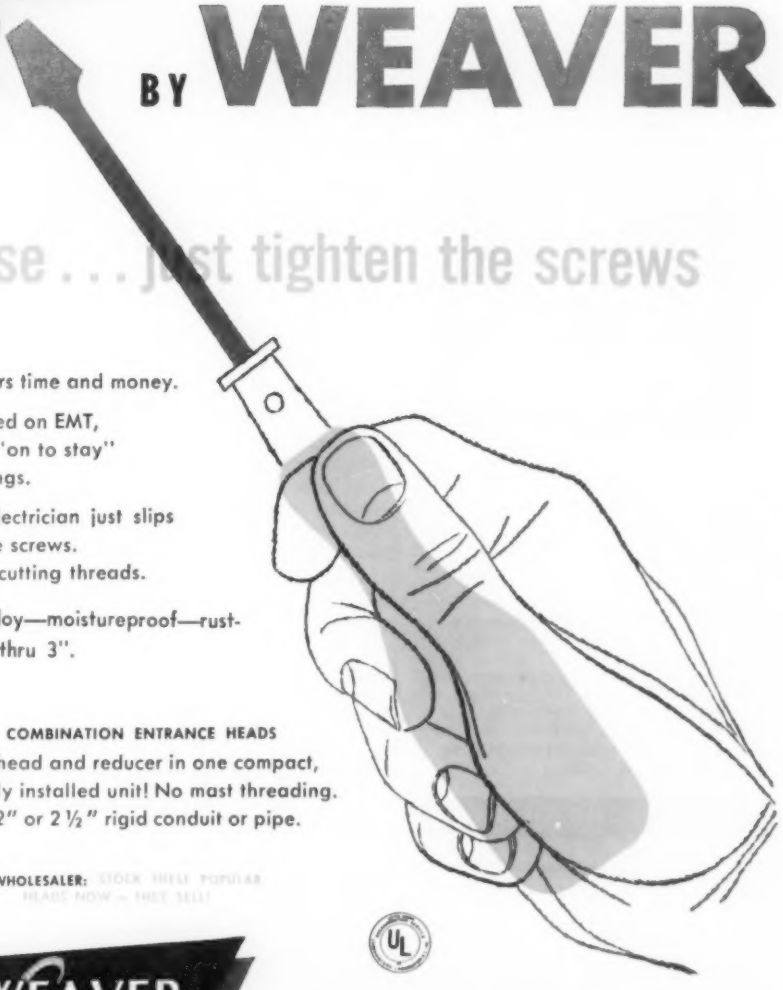
With rigid conduit, the electrician just slips the head on and tightens the screws. No valuable time wasted cutting threads.

Lightweight aluminum alloy—moistureproof—rust-proof. Eight sizes: ½" thru 3".



NEW COMBINATION ENTRANCE HEADS
. . . head and reducer in one compact, easily installed unit! No mast threading. For 2" or 2½" rigid conduit or pipe.

MR. WHOLESALER: STOCK THESE POPULAR HEADS NOW — THEY SELL!



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MEDIUM and HIGH MOUNTING
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for
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Now Quad, for 37 years America's leading manufacturer of RLM incandescent reflectors, brings you these newly designed 16" and 18" diameter all white reflectors that incorporate top ventilation with a protective drip shield. These quality RLM reflectors are designed for easy, economical installation and maintenance with socket or exclusive Easy-Tach construction for pendant or box type mounting. They have highest illumination efficiency, 54% of the light output is in the 0 to 40° zone with 33° shielding. Contact your Quad representative or mail coupon for details.

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NEW LITERATURE

Terminal Blocks—Two new catalogs have been issued by Buchanan Electrical Products Corp., Hillside, N.J. Both catalogs cover sectional and one-piece terminal blocks, solderless connectors for wire splicing and terminating, squeeze-type connectors for non-metallic sheathed cable, insulated conduit bushings and knock-out plugs.

Switches And Terminals—A completely revised 24-page catalog of switches and terminals has been published by Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass. Catalog gives detailed information on expanded product line.

Floodlights—Bulletin No. 1097 describes new and complete line of "rear-lamped" floodlights by Steber Mfg. Co., Broadview, Ill. Booklet describes units suitable for sports and industrial applications.

Circuit Breaker—Complete information on General Electric's new low impedance ALB-IC circuit breaker is now available in a two-page color bulletin. The new publication, GEA-6759, contains complete descriptive, dimensional and ordering information. Booklet can be obtained from General Electric Co., Distribution Unit, 90 Whiting St., Plainville, Conn.

Ballast Cross Reference Guide—A new, up-to-date, cross reference guide has been published by the Universal Manufacturing Corp., Paterson, N.J. The new chart shows the Universal catalog number equivalents for ballasts of other manufacturers. It also contains a ballast rating table and information regarding mounting dimensions, individual cartons, code dating, etc. Guide, in either wall chart or loose-leaf binder size, may be obtained from Universal Mfg. Corp., Dept. GEB, 29-51 E. Sixth St., Paterson, N.J.

National Electrical Code—The 1959 edition of the National Electrical Code has been published by the National Fire Protection Association, and is in a pocket edition from the National Board of Fire Underwriters. The code sets up minimum requirements necessary for safety in the use of electricity for light, heat, power, radio, signals, etc., primarily in buildings. The code has been approved as American Standard C1-1959 by the American Standards Association, and is available at $1.00 a copy from NFPA or the American Standards Association, New York 17, N.Y.

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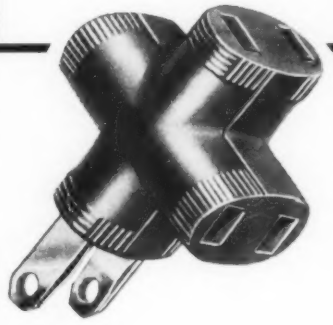
PROVEN SOURCE
OF
STEADIER PROFITS!



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NEW VINYL
CUBE TAPS

The Original and still
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Completely unbreakable Electrix Vinyl Cube Taps look better, they sell better. Cost you less. And behind those facts is an unequalled quality story of service and satisfaction that builds repeat sales . . . makes Electrix the most outstanding line in its field.

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Insulating Varnishes—The Irvington Div. of Minnesota Mining and Mfg. Co. has available a 34-page booklet giving complete detailed information on its line of electrical insulating varnishes. Information on different varnish types, detailed technical data on each, selector charts, application methods, and testing and product control can be obtained in the booklet, E-IVC (891) Jr which is available from the Irvington Div., St. Paul 6, Minn.

Magnet Wires—19-page booklet describes correct magnet wire for Hermetic Motors. Titled, "Enameled Magnet Wires for Hermetic Motor Applications," booklet includes comprehensive table of test data for each type of insulation recommended for hermetically sealed motor service. Booklet is available from Anaconda Wire and Cable Co., Dept. EFL, 25 Broadway, New York 4, N.Y.

Pendent Switch—New folder describes six button "Safe" switch. By means of an overlay design in the folder, an "x-ray" view of the switch both inside and out can be obtained. Switch wells, water seals, and micro-type positive switches can be seen in position. Folder is available from Electrical Products Div., Joy Mfg. Co., 1201 Macklind Ave., St. Louis 10, Mo.

Fixtures—New 52-page full color catalog shows new line of residential lighting fixtures in traditional, modern and contemporary designs. Also, "light idea" suggestions show how to use fixtures. Catalog is offered by Virden Lighting Div., John C. Virden Co., Cleveland 3, Ohio.

Low-Voltage Switching — Manual, RM-610, 20-pages, called Electrician's Manual of Remote Control Switching, is offered by REMCON Div., Pyramid Instrument Corp., Lynbrook, N.Y. Manual covers low-voltage switching and installation instructions, and is pocket-sized edition.

Underfloor Duct—Materials for under-floor electrical distribution systems—such as duct, junction boxes and fittings are illustrated and described in 20-page, 2-color catalog No. 35 available from Walker Bros., Conshohocken, Pa.

Small Basic Switches—New 20-page catalog No. 63 describes four lines of small basic switches. Catalog, issued by Micro Switch Div., Minneapolis-Honeywell Regulator Co., Freeport, Ill. contains details on almost 100 switches, actuators and assemblies.

FAST . . . . . Productive

ALL NEW 98

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- Easy To Transport—Only 180 Pounds
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- Improved Chuck—No Projecting Jaws You Can Work Within 1" Of Face Chip Problem Virtually Eliminated
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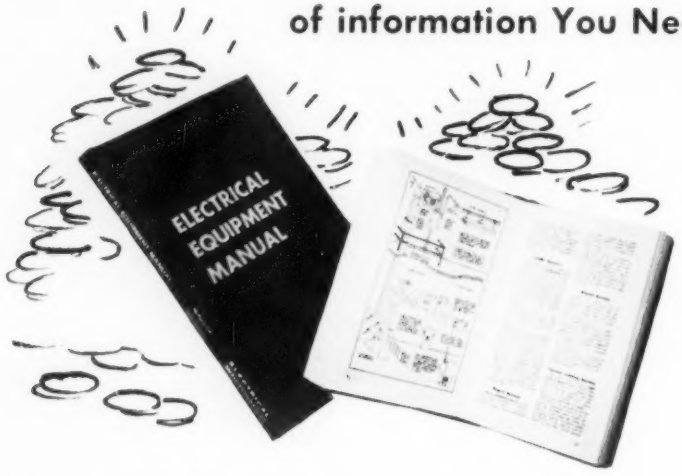

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Fully illustrated to cover CONSTRUCTION, OPERATION and INSTALLATION — with SPECIAL EMPHASIS ON THE NATIONAL ELECTRICAL CODE

GIVE a copy to each of your salesmen, to customers! More than just a nice gesture, it's a big benefit in a small package, at a low cost.

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MANUFACTURERS EXPANSION

Toronto, Ont., Canada—A new showroom, additional manufacturing space and expanded warehouse facilities have been added to the main plant of John C. Virden Ltd., Canadian subsidiary of the John C. Virden Co., Cleveland, Ohio.

El Dorado, Ark. — The Prescolite Mfg. Corp., of Berkeley, Calif., has announced that it will add 36,000-sq ft to the present 46,000-sq ft of floor space of its El Dorado plant.

Milwaukee, Wis. — The Louis Allis Co. has announced the construction of a new research and development center in nearby Greendale, Wis. The building reportedly will double the size of the present engineering and physics laboratories.

Louisville, Ky. — Thomas Industries Inc. has announced the establishment of a new export department which will market the products of each of the company's three major divisions on an international basis.

With only 6% of the people, the United States has 5% of all the electric power capacity in the world.

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Couplings

for right—tight connections

Accurate tapping, careful chamfering and rigid inspection combine to give users completely satisfactory installations. Conduit Couplings are hot-dipped galvanized or black enameled . . . are available in all sizes from ½" to 6". Sizes ½" to 2" are conveniently packaged at no extra cost. Shipped promptly from factory or from one of ten strategically located warehouses.

CONDUIT PIPE PRODUCTS CO.,
Conduit COLUMBUS, OHIO

SOLD ONLY THROUGH WHOLESALERS

DISTR-AGENT APPOINTMENTS

The Sandman Electric Co., Boston, Mass. has been named distributor for Allis-Chalmers Mfg. Co., Milwaukee, Wis. The firm's territory covers Essex, Suffolk, Norfolk and Middlesex counties in Massachusetts.

General Switch Co., Brooklyn, N.Y., a subsidiary of Crescent Petroleum Corp., has appointed Jack A. Clark as its Louisiana and Mississippi salesman. He was formerly a salesman in the New Orleans area.

The Edison Electric Institute Sales Div. has appointed J. Scribner Allen as sales representative in Washington, D.C. In his post, Allen will be available to provide information to government agencies in connection with the supply and application of electricity for various projects and developments, an announcement said.

Graybar Electric Co., Inc. has announced the appointment of E. S. Arsenault as Erie district financial manager. Arsenault began with Graybar at their Boston office as a creditman in 1947. He was transferred to the New York area in the same position in 1953, where he has been located up until his present promotion. The Erie district includes offices and warehouses in Cleveland, Toledo and Akron, Ohio.

Hampden Electric Supply Co., Springfield, Mass. has appointed Charles Moorhead as salesman in Springfield and nearby communities. He will cover contractors, and industrial and commercial firms in the area.

Appleton Electric Co., Chicago, Ill. has appointed six new regional sales managers. E. A. McNeill has been assigned the Northeastern sales region. He has been with the firm since 1935. Z. B. Greer has been assigned the Southeastern sales region. He has been with the sales department since 1938. W. G. Crum will control the East Central region covering the industrial states of Michigan, Ohio, Indiana, Pennsylvania, Kentucky and part of West Virginia. E. A. Hakanson has been assigned the North Central region. His territory includes Illinois, Wisconsin, Minnesota, North and South Dakota and parts of Iowa and Indiana. H. T. White has been assigned the South Central sales region. He joined Appleton in 1938 as a sales executive. H. A. Buegel has been assigned the Western sales district. He joined the firm in 1930.

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Long-reach Precision Pliers . . .

Your customers will really go for these specially designed electronics pliers by CHANNELLOCK. They'll like the surgical instrument precision with which they are crafted . . . the long reach . . . the hand-honed, specially hardened cutting edges . . . the comfortable "feel" of the blue plastic grips. And best of all, they'll like the price . . . no more than standard design pliers. Show 'em these specially designed, precision-made CHANNELLOCK Pliers . . . and they'll buy 'em.

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Meadville, Pennsylvania

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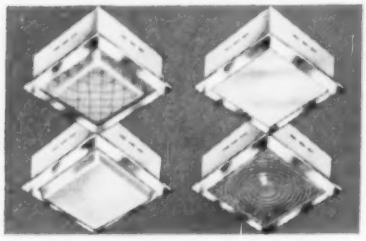
BUDGET RECESS SERIES FEATURES EFFICIENT LENSES, DIFFUSERS

Now at low, low prices . . . attractive fresnel lens, drop opal, satin frosted bent glass, or flat glass diffusers, in easy to install recessed fixtures. This Minute Mount Series represents outstanding value—never have comparable fixtures been offered at such low prices.

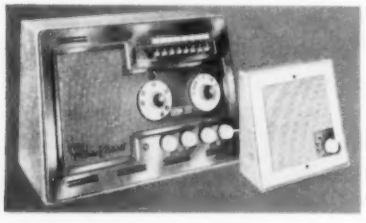


NITE GUARD POINT-OF-PURCHASE DISPLAY ATTRACTS ATTENTION

For even greater sales of Nite Guard, the automatic post lantern switch, an eye-catching, three color display is now available upon request. Designed for either floor or counter display—even when the lantern is already wired. Lively copy invites action from customers, prompts demonstrations.

SOUND GUARD INTRODUCES CONVERTIBLE RADIO INTERCOM

Now Sound Guard has designed a convertible intercom that eliminates permanent installation costs and problems. These handsome leatherette finished units move anywhere. Housing fits deluxe or economy Sound Guard systems. Easily converted to built-ins when desired.



PROGRESS MANUFACTURING CO., INC.
Philadelphia 34, Pa.
Please send information on ☐ Intercom
☐ Budget Recess ☐ Nite Guard Display
Name
Company
Address
2

NEW PRODUCTS YOU CAN USE

Expanding File Pockets

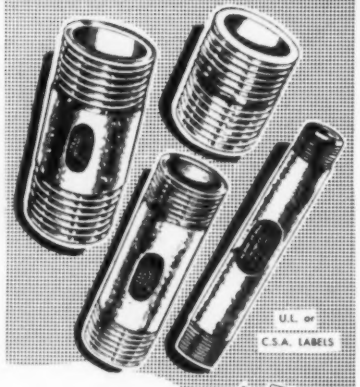
Alvah Bushnell Co., 925 Filbert St., Philadelphia 7, Pa.
Paperoid "Vertex" file pockets expand as papers increase. Papers can be inserted, removed or referred to, whether the pocket is used in filing cabinet or on table or desk. Front flap folds outward. Furnished in letter size, 9½ x 11½-ins over all; and legal size, 9½ x 14¾-ins over all.

Carton-Sizer

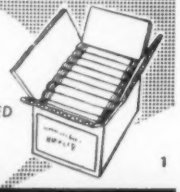
Markay Products, 18 East 11th St., Kansas City, Mo.
New aluminum tool called "Carton-Sizer" makes possible re-use of odd size cartons by scoring box walls at depth desired, so sides can be folded to proper size. Depth of scoring is controlled by adjustable depth gauge with set-screw. Also has shaped plastic handle.

SAN FRANCISCO — Graybar Electric Co. has leased a 3,500-sq ft space in the Western Merchandise Mart to display the 1960 Hotpoint line of merchandise, according to a company announcement.

RIGID *Conduit*
PIPE NIPPLES



IN STOCK
½" to 6" sizes
close to 12" long
HOT DIP GALVANIZED OR ALUMINUM
Also in wrought iron



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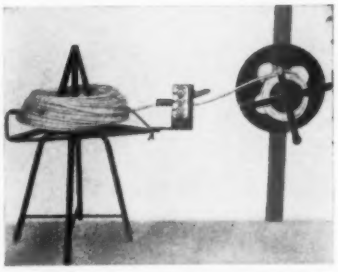
CONDUIT NIPPLE MFG. CO.
1455 SPRING GARDEN AVE. PITTSBURGH 12, PA.

HYKON MODEL SRM-18



WIRE MISER

gives you fast wire measuring service and guaranteed accuracy

Takes wire, rope, cable or other flexible materials up to one inch diameter. Will not tip, yet light and portable. Rigid welded construction. Meter reads up to 1,000 ft.; instant zero reset. Wire Miser is a proved profit-maker for fast dispensing of cut-lengths of heavy, bulky wire or cable. Used by hundreds of leading wholesalers, contractors, manufacturers.

NEW FREE CATALOG. Write for copy today.

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MANUFACTURING CO.
Box 923,
Mt. Union Station
Alliance, Ohio

MINERALLAC
"PULL-IN"
COMPOUND
No. 100

LISTED and APPROVED by UNDERWRITERS LABORATORIES

For Rubber, Synthetic, Plastic or Lead-Covered Wires or Cables

Approved by Underwriters Laboratories for lubricating wires and cables to facilitate pulling them into conduits. Not injurious to wire or wire covers. Free of objectionable odors. White in color. Will not drip or run. Convenient pint, quart, ½ gal., gal. and 5 gal. cans. Available through your electrical jobber.

MINERALLAC ELECTRIC COMPANY
25 North Peoria Street, Chicago 7, Illinois
MINERALLAC

Federal Pacific Electric Launches "Power Parade"

NEWARK, N.J. — The Federal Pacific Electric Co., Newark, N.J. has launched an eight-month, 10,000 mile "Power Parade" that will take an exhibit of its electrical control, distribution and power equipment to more than thirty cities across the nation.

"Now our customers will be able to see a company catalog — 'live' — " claims R. L. Bobo, Federal Pacific's vice-president-marketing.

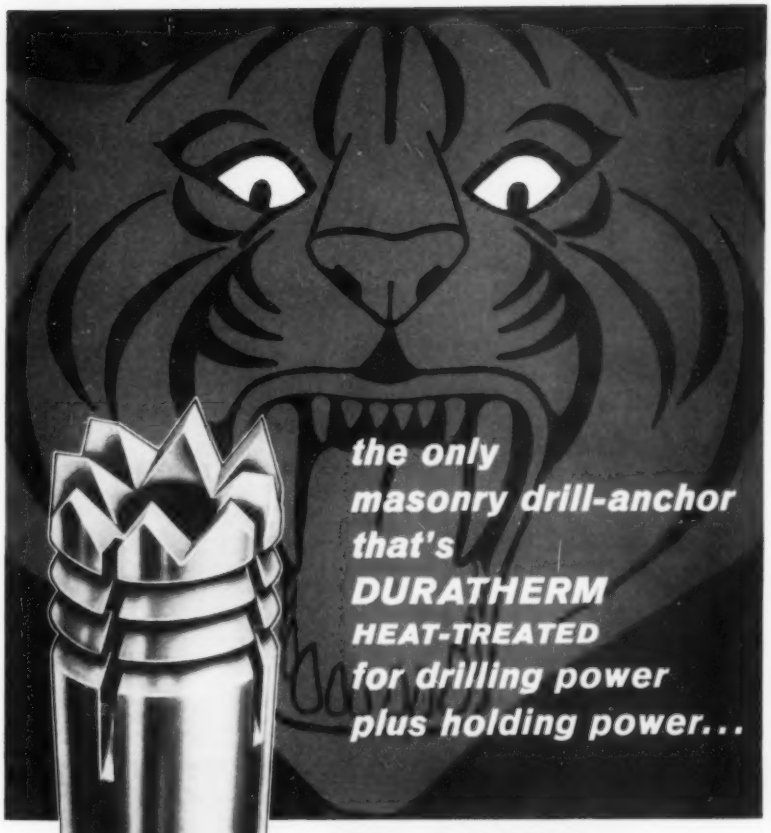
Three months in preparation, the "Power Parade" will tour the continent in a specially constructed trailer van. Inside will be about 50 representative types of the company's equipment.

Plastic Conduit Receives UL Listing

LOS ANGELES — The Kraloy Plastic Pipe Co., Los Angeles, Calif. has announced the listing of its PVC (polyvinyl chloride) rigid electrical conduit by Underwriters Laboratories. This is reportedly the first plastic electrical conduit to receive UL recognition.

PRECISION Engineered Fittings

M. STEPHENS
Mfg. Inc. Los Angeles 11
814 E. 29th St. ADams 1-9147



RAWL SABER-TOOTH DRILL-N-ANCHOR

for fastening any kind of fixture to any kind of masonry

- hardened so teeth keep their edge, drill a full hole fast
- toughened so teeth won't snap off, even in hardest concrete

...CUTS COSTS ALL-AROUND

- The anchor is the drill... no separate drills to handle or sharpen... no problem of matching sizes.
- "Core drill" design saves drilling time and labor.

Try the Saber-Tooth for yourself, at our expense, on your toughest masonry anchoring job... send the coupon for free sample and full information.

DRILLS FAST...HOLDS TIGHT...

- Drills its own hole in the hardest concrete, develops highest holding power.
- Tapered holding ridges around body make the Saber-Tooth bite harder, grip tighter.
- Expander slots assure complete, even expansion when anchor is driven home—teeth undercut hole deep in the masonry.
- All-steel construction resists shock, vibration, fire, rust.
- Snap-off joint is strong enough to hold during drilling, yet breaks clean after the anchor is in place.

THE RAWLPLUG COMPANY, INC.
202 Petersville Road New Rochelle, N. Y.

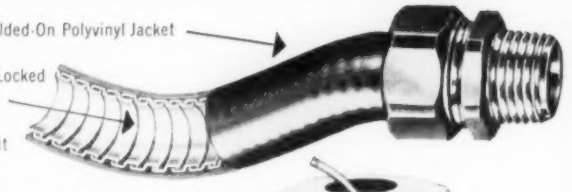
Please rush my Saber-Tooth sample and complete facts.

Name.....
Firm.....
Address.....
.....
RB

MOISTURE JUST CAN'T PENETRATE

LIQUATITE®

FLEXIBLE LIQUID-TIGHT WIRING CONDUIT



. . . nor can grease, dirt, oils, alcohols or most other corrosive vapors, acids, or other harmful elements. Circuits are *completely* protected.

Liquatite can be installed as quickly and easily as Flexible Conduit, yet assures the protection of Rigid Conduit. It follows contours, absorbs motion, vibration and shock indefinitely.

TYPE LT
J.I.C. APPROVED

TYPE LA
UNDERWRITERS
APPROVED

Find out why Liquatite is serving industry everywhere. Write today for free sample, costs and discounts.

ELECTRI-FLEX COMPANY

P.O. BOX 128A • ROSELLE, ILLINOIS

GE Launches Residential Development Operation

LOUISVILLE, Ky.—The General Electric Co. has announced formation of a Residential Market Development Operation which, through its support of the Gold Medallion Home Program, is designed to stimulate general interest in total electric living.

According to a GE spokesman, the operation is designed to show that the convenience of an all-electric home is within the reach of many average home buyers.

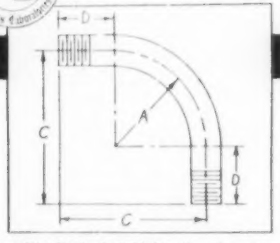
Headquarters of the R.M.D.O. will be at the Major Appliance Division's location in Appliance Park, Louisville. Six regional offices will coordinate the R.M.D.O. electrical systems sales and promotion with local builders, an announcement said.

Live Better Electrically Women's Conference Set

NEW YORK — The fourth "Live Better Electrically" Women's Conference is to be held January 7-9 at the Edgewater Beach Hotel, Chicago. Some 300 representatives are expected to attend the three-day meeting.

Columbus. BRAND

SIZES OF SPECIAL
LARGE RADIUS
90° ELBOW



radius "A" in inches	offset "C"	straight end "D"	length unbent	pipe sizes
12"	1'9"	9"	3'0"	1"-2½" inc.
15"	2'0"	9"	3'6"	1"-3" inc.
18"	2'4"	10"	4'0"	1"-3½" inc.
24"	2'11"	11"	4'11"	1"-4" inc.
30"	3'5"	11"	5'9"	1"-5" inc.
36"	3'11"	11"	6'6"	1"-6" inc.
42"	4'6"	12"	7'6"	1"-6" inc.
48"	6'0"	12"	8'4"	1"-6" inc.

Also available 45°, 30° and 60°. All are U.L. approved.

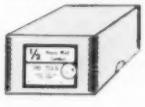
CONDUIT PIPE PRODUCTS CO.,
Conduit COLUMBUS, OHIO

SOLD ONLY THROUGH WHOLESALERS

SNAP!

THEY STAY ON.....
All VICTOR "MAGIC" CLAMPS and STRAPS for Thin and Heavy Wall Conduits have this time-saving snap-on feature.

Contractors everywhere are switching to VICTOR. Cash in on this heavy demand. Add these fast selling, profitable Clamps and Straps to your line.



VICTOR products are neatly packed, clearly and attractively labelled. Orders for stock items shipped within 24 hours.

Write for the new Victor Strap Catalog. Lists over 600 items to fasten Wire, Cable, Tubing and Conduit.

VICTOR SPECIALTIES, INC.
775 MAIN ST., NEW ROCHELLE, N.Y.
The Greatest Single Source for Clamps and Straps

Y-ER EAS
Wire Pulling Lubricant

Only Y-ER EAS has all these features

- Creamy, non-corrosive lubricant. Never greasy or messy.
- Prevents sticking or setting. Specially helpful on saddles and turns.
- Does not run back on cables.
- Never harmful to hands or clothing.
- Permanently non-harmful to cables or conduit.

Write for descriptive booklet

GIVES THE SLIP TO—
Lead, Rubber, Braid or Synthetic Covered Cables

AT ALL LEADING ELECTRICAL SUPPLY HOUSES

ELECTRO COMPOUND CO.
4153 W. 150th Street • Cleveland 35 Ohio

Briefs . . .

CLEVELAND—Start of construction of a new Westinghouse Electric Supply Company warehouse and office building in this city has been announced by T. J. Fifer, Cleveland district manager.

MINNEAPOLIS—The 23rd Upper Midwest Electrical Industry Convention and 10th Biennial Electrical Trade Exposition is scheduled to be held in Minneapolis from February 14-17.

FOSTORIA, Ohio—The Fostoria Corp., of this city, industrial lighting manufacturers, has acquired the business and products of the Faries-General Lamps Corp., Elwood, Ind., according to a Fostoria company announcement.

LOS ANGELES—Lightolier Inc., lighting manufacturers, has opened a new western headquarters, showroom, warehouse, and custom factory in this city, a report said.

DENVER—Ralph Hubbard, manager of the Rocky Mountain Electrical League since 1945, retired Jan. 1, after 46 years in the industry, it has been reported.

Columbus. BRAND

Nipples

for convenient,
money-saving connections

Conduit hot-dipped galvanized nipples are carefully threaded and chamfered, rigidly inspected and U.L. approved. Available in all sizes for prompt shipment from factory or ten strategically located warehouses. Sizes: ½" x close to 2" x 6" are all attractively packaged. Larger sizes 2½" to 6", in various lengths, also available.

CONDUIT PIPE PRODUCTS CO.,
Conduit COLUMBUS, OHIO

SOLD ONLY THROUGH WHOLESALERS

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An advertising inch is measured ⅞" vertically on a column—3 columns—30 inches to a page.

$1.50 per line minimum 3 lines. To figure advance payment count 5 average words as a line.

Box numbers—counts as 1 line
Position Wanted ads are ½ the above rate.

Discount of 10% if full payment is made in advance for 4 consecutive insertions

Send NEW ADS or Inquiries to Classified Adv. of ELECTRICAL WHOLESALING
P. O. Box 12, New York 36, N. Y. for February issue closing January 11th

ADDRESS BOX NO. REPLIES TO: Box No. Classified Adv. Div. of this publication. Send to office nearest you.
NEW YORK 36: P. O. BOX 12
CHICAGO 11: 520 N. Michigan Ave.
SAN FRANCISCO 4: 68 Post St.

POSITION VACANT

Manager wanted by growing South Carolina Electrical Wholesaler, must be high caliber, capable, steady, opportunity for part ownership; not essential. P-3041, Electrical Wholesaling.

Independent electrical distributor in Ohio with sizable share of local lighting market has opening for lighting sales manager. If you have experience in the lighting field, reply with personal resume to P-3290, Electrical Wholesaling.

SELLING OPPORTUNITY OFFERED

Representatives calling on Electrical Distributors in all states for old established mfr of desk lamps, bedlamps, shoplites, plastic reflectors, etc. Commission basis. Protected territories. RW-3298, Electrical Wholesaling.

Salesman: Electrical Wholesaler New York City and vicinity. Prefer industrial following. Advise age, qualifications. SW-3309, Electrical Wholesaling.

Representatives in all states to represent manufacturer of new line of fluorescent lamps with special long life features. Must have good background with electrical wholesaler. Write: Sucar Laboratories, 1197 McCarter Highway, Department L, Newark, New Jersey.

SELLING OPPORTUNITY WANTED

Mfg'rs Rep. covering Connecticut seeks quality lines for Electrical Wholesalers. RA-2860, Electrical Wholesaling.

Established Agent selling to Electrical Wholesalers desires additional line for Eastern Pennsylvania, Southern New Jersey and Delaware. RA-3285, Electrical Wholesaling.

Attention Electrical Supply Manufacturers: Extensive representation and promotion available Metropolitan N.Y., N.J. wholesalers! RA-3312, Electrical Wholesaling.

Michigan—Representative handling major elec- trical line fifteen years, now in position to handle additional lines. Calling on distributors, contractors, architects, industries etc. RA-3263. Electrical Wholesaling.

Manufacturers Representative covering Northern New Jersey desires additional quality lines for Electrical Wholesalers. RA-3286, Electrical Wholesaling.

When Answering

BOX NUMBERS . . .

to expedite the handling of your correspondence and avoid confusion, please do not address a single reply to more than one individual box number. Be sure to address separate replies for each advertisement.

MANUFACTURER'S REPRESENTATIVES WANTED

Manufacturer of nationally advertised quality line of competitively priced commercial and industrial fluorescent fixtures having architect-engineer-utility-contractor acceptance, sold through wholesale electrical distributors, seeks agency representation in the following key trading area:

Baltimore, Washington, D.C.; Atlanta, Savannah, Georgia; Memphis, Little Rock, Des Moines, Omaha.

Please forward resume including educational background, lines now handled, and territory covered.

RW 3163 Electrical Wholesaling
520 N. Michigan Ave., Chicago 11, Ill.

LIGHTING REPRESENTATIVES WANTED

NATIONAL LIGHTING FIXTURE MANUFACTURER with full line of fluorescent and incandescent products has recent openings for representation in several of the leading growth areas.

ARIZONA—COLORADO—UTAH

Progressive organization with excellent catalog constantly offering new products and promotional aid with the assurance of good service and delivery. Good earnings assured if you have the ability combined with experience and aggressiveness.

Send full details to RW-3240 Electrical Wholesaling.
68 Post St., San Francisco 4, Calif.

WHOLESALE ELECTRICAL SUPPLY SALESMAN AND COUNTER MAN

To the man who wants to get ahead and knows how to sell, we offer an opportunity for advancement, with good salary and commission. In a fast growing State having ideal climate the year around.

R & R ELECTRIC, INC.
P.O. Box 2890, West Palm Beach, Fla.

MANUFACTURERS REPS WANTED

Several territories still open. Opportunity to cash in on fast selling electrical tool. Retails for $1.98. Sold through electrical, hardware, and automotive jobbers.

BURNWORTH TESTER COMPANY,
815 Pomona Avenue, El Cerrito 8, California

Aggressive agency with warehouse facilities, selling to electrical distributors, desires additional lines for Western Missouri, Kansas, and Oklahoma. Resume furnished on request.

RA-3103 Electrical Wholesaling
520 N. Chicago Ave., Chicago 11, Ill.

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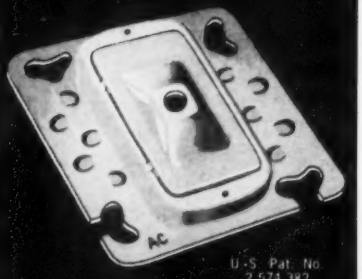
—for you—the advertiser—and the publisher, if you mention this publication. Advertisers value highly this evidence of the publication you read. Satisfied advertisers enable the publishers to secure more advertisers and—more advertisers mean more information on more products or better service—more value—to YOU.

Case of the Missing Outlet Box . . .

SOLVED by —

ARROW CONDUIT'S

PLASTER GUARD COVER for 4" Sq. & 4-11/16" Sq. Boxes



U.S. Pat. No. 2,574,382

- Plaster Guard prevents plaster from entering box.
- Raised section easy to locate after plastering.

Work with cleaner outlet boxes, free from usual plaster fill-in. Raised Plaster Guard section is easy to pry out. Available on all Arrow 4" Sq. and 4-11/16" Sq. covers.

Write for detailed information.

Skill & Experience . . . active ingredients in all Arrow products

ARROW CONDUIT & FITTINGS CORP.

129 30th Street, Brooklyn 32, N. Y.

OUTLET BOXES • GANG BOXES • COVERS • BOX SUPPORTS

ARROW CONDUIT & FITTINGS CORP

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F. J. Eberle, Business Mgr.

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the tape of the experienced electrician

EVERY splice you make must be *final, permanent* and *safe.* SLIPKNOT PLASTIC TAPE is engineered for *dependable* adhesive quality and *proper* stretch to insure a neat, tight wrap that molds to any irregular shape and *stays down.*

And Slipknot's patented, exclusive cutter, packed free with every 66-foot roll, solves the handling problem — swiftly, handily, easily. No waste . . . no distortion . . . no effort.

Next time, *specify* SLIPKNOT PLASTIC ELECTRICAL TAPE from your distributor.

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PLYMOUTH RUBBER COMPANY, INC.

QUALITY SINCE 1896 CANTON, MASSACHUSETTS

Right off the press...

Contains— Table to determine size wire to be used and volt loss . . . How to select correct protective devices for electrical circuits, motors, appliances and apparatus . . . Code rules on motor protection set forth in simple form . . . Motor Tables showing ordinary fuse or FUSETRON fuse to use—and size of switch or fuseholders required, and much more information valuable to every plant man.

This new booklet can help you get more fuse business

One thing you can do to show your customers and prospects that you are in a position to help them is to pass along helpful service manuals and bulletins that manufacturers get out.

For example, BUSS brought out the booklet above to help men in charge of electrical installations and maintenance get the most out of their fuses.

This booklet is practical, concise, and well illustrated. It has been welcomed by thousands of men in charge of plant operations. It is free for the asking.

Among your acquaintances in industry there must be men who would also welcome having copies of it. You can do such men a favor and build goodwill for yourself by seeing to it that they get copies.

Just make up a list of the men you believe would be interested in the Protection Handbook and show it to the BUSS Fuseman in your territory. He will be glad to furnish you with the number of booklets you need.

Buyers prefer to do business with people they like. That's why building goodwill is one of the surest ways to bring in new business and hold old customers.

BUSSMANN MFG. DIVISION
McGraw-Edison Company
St. Louis 7, Mo.

ANOTHER OUTSTANDING DEVELOPMENT BY THE MAKERS OF BUSS FUSES

FOR INSTALLATION THROUGHOUT THE ENTIRE ELECTRICAL SYSTEM

FUSETRON DUAL-ELEMENT FUSES